AMERICAN BEE JOURNAL

Vol. LXXI—No. 5 Hamilton, Illinois, May, 1931 Monthly, $1.00 a Year

Super Efficiency—Is It the Hive or the Management?

By James M. Crosby
Illinois

An interesting query is brought out by Mr. Crosby. He gives figures to show the amount of honey, from three sizes of hives, per comb of brood. Everything else equal, which figures higher in importance, the size of the hive or the prolificness of the queen? Mr. Crosby answers, "The highest success comes from the best stock."

WHEN I started in the bee business seven years ago, I did considerable reading about hives and found reports of a hive larger than the ten-frame standard used with satisfactory results, so I decided to try making some with fifteen frames. I made sixteen as a starter to make a thorough test.

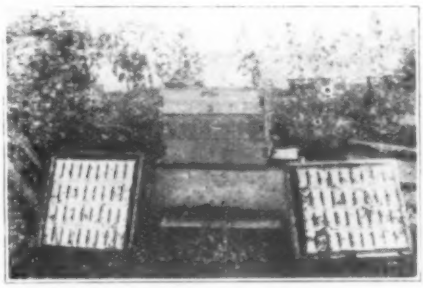
The first season I used them was in 1924, and only three colonies were established in them early enough to make comparisons in crop. Two were Italians, the other a hybrid, but a good queen. The hybrid made two hundred pounds of comb honey. The best Italian colony might have done as well, but I took out several frames of brood to use in some of my poor colonies for new queens.

This Italian colony made 160 pounds, the second Italian about 120 pounds. The best ten-frame colony that season, a hybrid, made 168 pounds; the best eight-frame colony of Italians made 144 pounds.

In 1925 the highest producing colony was in a fifteen-frame hive headed by the best queen I raised in 1924 and made 200 pounds of comb honey. The queen did not mate with an Italian drone. The workers looked about three-fourths Italian. The best ten-frame colony was headed by a very good Italian queen from Texas. They finished six supers. I am not certain about the eight-frame hive that year, but believe it was the same one as in 1924, with about the same amount of honey. I succeeded in raising a few queens from this hive.

By the middle of July, 1925, I had all my large hives in use. The colony in the big hive that made 200 pounds was one of the first to start work in the supers, and it was the first to have a super completed.

In 1926 the crop was short, due to cold rain. Yet the bees came through winter well and did good work, considering. The highest producer was in a fifteen-frame hive headed by one of the queens I raised in 1925, and made 120 pounds of comb honey. The best ten-frame hive made three supers; the best eight-frame hive was the same one of the two previous seasons, headed by that good old queen I got of Herman McConnell. They swarmed late during my absence, leaving their third super nearly finished. I remember this queen was still large and plump just like a young queen, and I certainly hated to lose her, but succeeded in raising a few daughters from her that season in spite of the bad weather.



One of Crosby's fifteen-frame hives

How My Big Hives Are Made

My big hives are two feet long, outside measure, and just as wide as the ten-frame hives are long. So the frames are put in across the narrow way, with an entrance the full length of the hive. As I made them at first, the supers held forty-four sections. I noticed that with the exception of the very best colonies they would work slowly on finishing these long supers. I came to the conclusion that it would be a good plan to cut these supers down to thirty-six sections, making them square. So in January, 1927, I cut them all down. That makes the supers four inches shorter than the hive.

The space at the end I cover with a narrow strip of board when the supers are on, furnishing a very good system of ventilation in hot weather, as that board can be adjusted to suit conditions. A half-inch space between the board and the super makes another entrance which they often use, and it gives them a chance to evaporate their honey more rapidly. There is no robbing, but I am careful to have this space open only during the honeyflow. The hives are all double-walled, with a large telescope cover to give protection from the sun and rain.

The summer of 1927 was an extremely good honey season, commencing in June with white clover and lasting until September 10. Because of sickness in April, the bees got the start of me and were making honey and swarming before I had the winter supers off. However, I got on the honey supers as soon as I could and kept close watch.

I had a fifteen-frame colony under a big white oak, headed by a queen I raised in 1926, which I had picked out to be a winner. They were the first to enter the super and worked very rapidly. Just a few feet away was a ten-frame colony headed by a queen I reared in 1926 that promised to run close second. However, it swarmed out after finishing the third super early in July, leaving every frame packed full of brood.

At this time the big colony under the white oak had their third super nearly full, so I think they were a few pounds of honey in the lead. When the season's work was over

they had their ninth super half done, 300 pounds of comb honey. The best ten-frame colony, headed by a daughter of the queen I got from Texas, made seven supers. The best eight-frame colony, headed by a queen I raised in 1926, produced six supers.

When I took the honey off, I decided to keep a record of all the hives. The fifteen-frame hives averaged 5½ cases, or 9 pounds per brood frame. The ten-frame hives averaged 3½ cases, or 8 2/5 pounds per brood frame. The eight-frame hives averaged 2½ cases, or 7½ pounds per brood frame.

I did not have time to attempt to raise queens in 1927, except to save a few cells from the best queens at swarming time.

During the winter of 1927 and 1928 I decided to produce more extracted honey, so I bought an extractor super of full depth for each one of my ten-frame hives. In the spring I transferred some of the eight-frame colonies into big hives and used the eight-frame hives for extracting supers. So I had an extracting super for every one of my eight-frame hives.

The season of 1928 proved to be a poor one. We had many days that were too cold for the bees to do anything. The big colony under the old oak was still in prime condition and I had another fifteen-frame colony headed by a great-granddaughter of that best queen which I bought in 1923, that promised to be a match for my champion of 1927. Long before the honeyflow began they were both so populous they could not find room to get in out of the cold rain. So I took pity on them and gave each one of them a super.

As I had a number of bait sections on hand from which I had extracted the honey the past winter, I decided to try an experiment. To the colony under the white oak I gave a super full of sections with full sheets of foundation; to the other one, a super full of bait sections that had never had the honey cleaned from them after extracting. Of course, the bees soon crawled up and cleaned these combs. The one with all foundation began to go up within a few days to find more room.

When the honeyflow began they started work in the supers at about the same time. The colony with the super full of bait sections had their first super completed when the one under the old white oak had their first sections sealed and the rest well under way. It looks to me as if the main value of bait sections is that they save the bees the work of making that much comb. Of course, when a colony is inclined to be sluggish, bait sections would help induce them into the supers. At the different times I have used them, I have always come to this same conclusion. After the first super these two colonies ran a pretty even race, each making about 120 pounds, both in fifteen-frame hives.

The best ten-frame colonies drew out the combs for their extracting super and made a super of comb honey. The best eight-frame colony made two supers of comb honey in addition to their extracting super. I was very busy that fall, so I did not keep records of all the hives. I learned to graft queen-cells and raised fifteen queens from the colony with over 400 pounds to its credit for the past two seasons' work. It went into winter quarters in fine condition.

Prolificness versus Hive Size

Although I am very well pleased with the results with my big hives, I must say that the nature of the bees in the hive has more to do toward producing a big crop than the actual size of the hive. Where the winters are short and mild and the honeyflows are not very long, these fifteen-frame hives might even be bigger than necessary.

It makes no difference about the location. The man who meets with the highest success is the man who has the best stock in his hives. That does not necessarily mean pure stock, but it does mean stock that has come from a long line of high producers.

I have found a poor queen in a big hive a worse failure than she would be in a small one. In fact, I remember a queen that did not produce any surplus in an eight-frame hive. Possibly if she had been in a four-frame hive I would have gotten ten or twelve pounds of surplus. However, I don't intend to make four-frame hives to accommodate such queens.

It stands to reason that the better our queens are the bigger the hives we will need. A good queen will keep a dozen frames filled with brood during the spring and early part of summer. In my fifteen-frame hives that means there will be three frames only which they can fill with honey while drawing out the foundation in the first super. At this time, if it is found that they have too much old honey left over, it can be removed and extracted. This extra room seems to help to prevent swarming. It must be remembered that a crowded condition is only one of the reasons for swarming. Some strains of bees will swarm if they have a hive as big as a freight car. This is another argument for good stock. Swarming cannot be eliminated entirely, but it can be reduced, and large hives are a help.

To sum up, there are only two things essential for a high degree of efficiency: (1) A good queen from a high producing strain; (2) a hive large enough to accommodate this queen's laying capacity and to insure an abundance of stores.

When these two requirements are met, it looks to me as if the man who has a large number of bees to care for will be kept out of mischief just keeping them all supplied with supers and doing a good job of harvesting and marketing.

WHITE—What Does That Mean, Applied to Honey

By George W. Bohne
Louisiana

Statistics are usually dry, and these figures about honey should have a flavor, but I find even that is almost missing. A laborious tabulation carried on for more than a year brought out the following figures, based on advertisements in the Journal and on Government reports:

The word WHITE appeared in 80 per cent of the honey advertisements in a single issue. In another, 90 per cent, with an average of 91.3 per cent for the year in all the issues tabulated. Some advertisements featured WHITE from two to five times, making the percentage over all read 103.2 WHITES to every hundred honey advertisements.

Government reports also worked WHITE hard, with a minimum of 64 WHITES in one report, and in one seven-page report there were actually 119 WHITES and WATER WHITES.

What about flavor? It was almost missing. Less than 1 per cent of all the advertisements contained the word "flavor," and if we take such words as "delicious," "good quality," into consideration, we find just 3.1 per cent of all the advertisements examined thought enough about flavor to mention it in the same breath with WHITE.

This word WHITE, smothering honey, is like the thick meringue which covers the average lemon pie—the best part of the pie is under the cover.

The dark honey producers today are smothered in a deluge of WHITE honey grading, with no regard to FLAVOR. We are not asking favors, we do not need them, but eventually we must have a fairer grade reporting system, under which every honey will stand or fall on its own merits. And let me add, parenthetically, that Southern Honey is **not going to fall.**

Scrumptious—Honey on Batter Cakes

Honey on batter cakes is just scrumptious. A spoonful in the batter instead of the usual dash of sugar is satisfactory, too. That goes for waffles, also. L. K. W.

Why the 1930 National Honey Week Was Successful

By Malitta D. Fischer, Honey Specialist, American Honey Institute

Marjorie Child Husted and the Test Kitchen of Washburn-Crosby Company, Inc. Mrs. Husted's broadcast during Honey Week was the biggest honey feature of the year. Mrs. Husted is director of "Betty Crocker's" staff.

HOW in two weeks could a concentrated sales promotion program such as National Honey Week be organized and put over, and according to reports "successfully" put over?

Just the other day I noticed pictures of windows that had been arranged in recognition of National Business Women's Week. Governors in many states issued declarations favoring such a week. All types of merchandising channels cooperated with the National Business Women's organization, tying up their programs with that of this group. As I passed by the furniture window and saw a typical business woman's room in the window; by the grocery store and saw the food suggestions that save time for the business woman; by the drug store and saw the medical aids for business women, and so display after display tied up with the business woman's movement, I could not help but realize what a great many things our beekeeping organizations had forgotten to do in their national week.

An analysis showed that most national week movements spend a year in planning a program—a year of preparation — and then I realized more than ever before what cooperation means.

If it had not been for cooperation of friends of American Honey Institute, where would we have gotten with but two weeks of preparation and announcement on our National Honey Week for 1930? But I'm not going to tell you about all these friends who helped us "put it over"—you have been hearing about them in News Notes of American Honey Institute. They are the dependable women in home economic fields—the home demonstration agents, the home service directors for utility companies, the home economic directors of food companies, household equipment companies, educational directors of various manufacturing companies, trade associations, household chat directors for radio stations, home page editors. And we must not forget our standbys, the agricultural county agents. The Washburn Crosby Company, Inc., Minneapolis, Minn., through its Home Service Department, had a big part in the 1930 "Honey Week." Dr. Barnard has known the vice-president of General Mills a long time, and it was this personal friendship that paved the way for the Betty Crocker, Kitchen-Tested, Honey-for-Health broadcast.

For a number of years the home economic women going from the Washburn Crosby Home Service Department have been known as Betty Crocker. There have been many Betty Crockers; there are many of them now. All of the members of the Home Economic Department are included in the picture of the Washburn Crosby testing kitchen, and these are the women who did the experimenting and testing that led to the development of honey combinations that might go out under the "Kitchen-Tested" label.

Mrs. Marjorie Child Husted is in charge of the Home Service Department for Washburn Crosby Company, and it was she who gave the "Honey for Health" broadcast over the National broadcasting chain that reached from coast to coast and from Canada to the Gulf. Mrs. Husted gave this broadcast the first day of National Honey Week. She officially opened National Honey Week and certainly **her** introducing the week was most valuable.

Many of you heard her and know what a splendid honey talk she gave, but really you know little of the significance of such a broadcast until you know what a recipe must pass through before it can be included in Betty Crocker's broadcasts and carry the "Kitchen-Tested" stamp.

I am informed by both Mrs. Husted and Mr. Gale, advertising manager of Washburn Crosby, that American Honey Institute can definitely promise you another Honey for Health broadcast to open up National Honey Week in 1931.

Mrs. Husted writes to American Honey Institute: "I shall have to know considerably ahead of time just what week that will be. I believe that any time from October to December works out nicely for a broadcast on baking with honey. The only difference the date makes as far as I am concerned is whether it will be **seasonable** for the use of **considerable** honey, and whether I can know enough in advance to plan it as **one of my cooking school lessons** in a long series." Since then dates for the National Honey Week for 1931 have been set for November 9 to 14. Beekeepers should get ready right now planning for that big time.

In commenting on the Honey for Health broadcast given in 1930, Mrs. Husted says:

"The broadcast brought in so many comments indicating that women had been looking for just this sort of information, and so many expressions of appreciation for the practical recipes, that we decided the subject of baking with honey was a very popular one with most women and that they would welcome another talk featuring this natural food and other recipes for its use"

In addition to giving the broadcast, a special packet of honey recipes was made up and mailed to anyone requesting honey recipes. These packets of honey recipes are still available and may be secured by writing to the Home Service Department of Washburn Crosby Company, Inc., Minneapolis, Minnesota, and mentioning that you read the Betty Crocker story in this Journal.

Just so you may know what it means to have honey suggestions going out under the "Kitchen-Tested" regulation, I shall include the story of how Gold Medal Flour is kitchen tested.

How Gold Medal Flour is "Kitchen-Tested"

Several years ago it became apparent that even the most exacting

(Continued on page 240)

National Honey Week—Nov. 9-14, 1931

It is not too early to begin to think about National Honey Week, although it will not start until November 9. A program will be outlined by the Honey Institute with which every beekeeper can cooperate in some way. To make the most of such an opportunity, we should tie up with every possible product which can be used with honey. This will be to the advantage of the other product as well as ours. If the baker advertises bread and honey it will sell more bread as well as honey and baker and beekeeper both profit. We must expect to help the other fellow if he helps us.

A well organized effort should be made to call public attention to honey by every possible means. Stories of bees and honey should appear in the newspapers, radio broadcasts should be given, honey should be on display in every food store and on the menu of every restaurant. To accomplish this result will require the combined efforts of everybody interested in the production and sale of the product.

A Regional Idea in Organizations

On another page appears an article from Mr. W. E. Anderson, state entomologist for the State of Louisiana, on his proposed plan for a national organization through regional associations. Mr. Anderson bases his plan particularly on the successes which have accompanied the regional and national organizations in the state plant board work.

We are inclined to believe that a similar plan of organization was proposed for the American Honey Producers' League several years ago, but the idea never materialized. Mr. Anderson, by hooking the idea up with the state plant board, the state apiary inspectors, etc., apparently has hit on a happy idea of making all of these units work as one and thus evolve a truly representative organization which would allow every section of the country to be properly represented through county, state and regional organizations, with an occasional national meeting set aside.

His idea is that this could be used respectively for the support of an organization like the American Honey Institute or for the underwriting of that organization. Certain it is that if the American Honey Institute is ever going to succeed as it should, as the disseminator of information on honey before the public, it will only be through such a plan whereby the individual beekeepers in all sections of the country can be represented in such an institution and can bear their just portion of the expense of that organization.

Mr. Anderson's article is only the first step, of course. It proposes the organization. The real work is in the formation of such regional and the thorough collaboration of all sections of the country, even to the end that abundant finances may be available for the carrying out of any projected scheme.

We are inserting Mr. Anderson's article for the criticism and constructive remarks of our readers. We are sure that Mr. Anderson would be glad to get correspondence on this subject so that any feasible plan might be evolved.

Changing Food Habits

Part of the economic problem on the American farm is due to the changing food habits of the public. It is evident that the change from horses to automobiles as a means of transportation has greatly restricted the demand for hay and grain, since autos do not consume these products. This change alone seriously affects the markets of the grain farmer.

Changes in human food habits are also sufficient to make a great difference. Official estimates place the per capita consumption of wheat at 222 pounds in 1900. By 1930 this consumption had been reduced 45 pounds. Besides bread, we now eat vegetables, milk and fruit. If each of us requires three pecks less wheat to sustain him than was formerly the case, the total amounts to near a hundred million bushels, and that would be a sizeable surplus. Human consumption of corn has dropped from an average of 117 pounds to only 22 pounds. The old standby, corn meal mush, has about disappeared from the American table, and if it were not for corn flakes, corn would be just about out of the grocery list. We also eat less potatoes.

While these changes have been going on we have increased the average consumption of sugar from 61 pounds to 105. It would be expected that honey would find a greatly increased outlet in view of this change in popular taste. It is probable that it would have done so had the beekeepers carried on a vigorous campaign to acquaint the public with its true character.

Vegetables, fruits, dairy products and sugar have greatly profited by our changing habits, while potatoes and cereals have declined in popularity.

Yellow Caucasians

If one examines the map of Russia, one will notice that the Caucasus occupies a space of about six hundred miles from east to west and over two hundred miles from north to south. Aside from the principal mountain range, there are smaller ranges that divide that part of Russia into a number of different provinces. Kutais, Baku, Tiflis, Elizabethpohl, Erivan, Kars, Batum are all in Transcaucasia—that is to say, on the south side of the main range of the Caucasus; these are practically all separated from each other by secondary mountain ranges. So, in the Caucasus, the bees are not all of one race, as they are in Italy, and we understand that there are very yellow bees in the farthest provinces to the south.

Tiflis has been mentioned to us as having the most desirable race of bees, a gray bee, while in Erivan the bees are yellow and very cross. But until there are practical beekeepers all through the Caucasus district, it will be impossible for us to decide which are the best.

In Italy, on the other hand, the bees are separated from other countries by high mountains, the only spots where there is a possibility of mixture being on the edge of the Adriatic, north of Venice, and on the west end of Liguria, along the seashore towards France. In those sections slight shadings of color show the mixture with other races.

Upper Entrances

A great deal has been written about this question. But most of the writers have failed to mention the difficulty there is for the bees to clean their hive, when they have to carry the bodies of dead bees, and refuse in general, one or more stories upwards before being able to get rid of such refuse.

If our beekeepers will watch the hives as early in the season as the bees are able to fly, they will see them hard at work dragging out dead bees. It is true that we can save them a great deal of this work by raising up the hive from its bottom and scraping the litter away. But we cannot always do it as early as the bees are willing to do it.

At all times of the year there is more or less rubbish to clear away, and the bottom entrance serves best for that purpose. As for any advantages derived from an upper entrance, we have never been able to see them, although we had hives with upper entrances many years ago. When a loaded bee arrives from the field it cannot always reach an upper entrance without settling down first. If the entrance is on the bottom board, we will often notice the bees alighting an inch or two, sometimes farther, from the opening and then walking the rest of the way. There is a saving of labor in this. When the field bee enters the hive it soon finds some young bees to lighten it of its load. The latter take care of the honey and place it in proper storage room at leisure.

On the whole, we cannot see the least advantage to an upper entrance.

Meeting the Test

In spite of the present business depression, some beekeepers are making money. The man who has a good location and a good local market is coming through with little difficulty. The man who has a poor location and a shipping market finds it hard to make ends meet with low yields and low prices.

Some who have good markets but secure small average yields are finding it possible to buy honey from the large producing centers as cheaply as they can produce it at home. By making the most of the market opportunities they are making a profit and helping to relieve the situation by disposing of some of the surplus.

It is times like these that put us to the test. Better methods of production and more efficient marketing are necessary than in the flush times of the past.

Apples or Oranges

California orange growers have set a fine example of efficiency in marketing their product. By careful grading and efficient distribution, together with consistent advertising, they have greatly increased the use of citrus fruits. Official estimates indicate that the per capita consumption of oranges is nearly three times what it was thirty years ago. When we consider that oranges are produced in a relatively small area, far from the principal centers of population, this is a wonderful showing. The surprising thing in this connection is that, while consumption of oranges has increased so largely, the average consumption of apples has decreased from 107 pounds in 1900 to 68 pounds in 1930. Here is a fine example of the value of advertising. Orange growers living far away have taken our market for apples by skillful advertising.

Granulated Honey Best

Our Canadian friends distribute their product under the name "Beekist Honey." Included in their advertising matter is a little booklet entitled "Honey for Health," by Dr. Josiah Oldfield, of Lady Margaret Hospital, London, England.

It is interesting to note that the doctor recommends honey highly as a health food and states that they use tons of it at the Lady Margaret Hospital. We quote him as follows:

"The best honey is that which, once it has been extracted from the comb, is never heated, but is allowed to set in a more or less solid condition, and is so kept until it is used.

"As far as possible, heated honey should be avoided, and the solid honey should always be selected for those who want the finest and best of foods."

Granulated honey is properly appreciated in European countries and no prejudice is aroused by this natural process. American beekeepers have lost much by attempting to avoid granulation by heating, instead of informing the public concerning it. When we heat honey in an attempt to retard granulation we change its character and lose much of the fine flavor, which is its most attractive quality.

It is interesting to note that the doctor prescribes for his patients only honey which has been matured for at least two years.

Push Local Sales

There seems to be but one sure way to prosperity for the honey-producing industry, and that is by pushing local sales to the limit. In many localities where beekeepers have developed home markets the crop has been sold at a satisfactory price and the producers are prosperous. Where large scale production makes it necessary to depend upon wholesale markets at a distance, sales have been slow and much honey is still left on hand.

We believe that it is possible to sell far more honey in American markets than has ever been accomplished. If every beekeeper will do his best to develop the home market, and when his own crop is sold will buy from those who have a surplus and keep on selling, much progress will be made toward solving our marketing problems.

Honey is not a staple and requires sales effort to keep it moving. Every new sales outlet helps to relieve the situation. With high tariffs already in force in several foreign countries which have been our best customers, and prospect that others will follow, there appears to be little hope for improved foreign markets. If we must sell at home, it will require the best efforts of all to develop new markets at a time when there is so much competition with other food products which also have a big surplus.

Old Days and New

The Chicago Journal of Commerce quotes a prominent banker as saying that the present depression is due largely to the great expansion of installment buying and the making of debts which must be liquidated in time of greatly reduced income.

In view of the luxuries demanded in the present day, one feels constrained to compare conditions now with those of forty years ago and to wonder whether it is worth the price. Then every home, especially country home, was sufficient unto itself.

As the writer remembers the preparation for winter, it seems that cash played a small part. There was a big pile of potatoes, turnips, parsnips, carrots, cabbage and squashes, all raised in our own garden. There was an abundance of dried apples and bushels of fresh apples from our own orchard. There was jelly and jam and canned fruit and honey; there was sorghum molasses and apple butter. We butchered a hog and a sheep, and the neighbors together divided a beef among them.

The winter was spent in getting up a pile of wood big enough to last another year. True we did not have fresh lettuce in January nor strawberries until they ripened in our own patch, but there was such an abundance of supplies that we felt no lack. What difference did it make if the stock market did crash or factories close down? As long as we had our own store to draw upon there was comfort in abundance. Our own cows furnished our milk and the butter was churned in our own kitchen. Always there were fresh eggs and chicken for instant use, regardless of the market.

The present day brings more luxuries, but we have exchanged our old-time independence for radios and automobiles and other nonessentials, and when business slows down we feel the pinch. Again the question arises as to whether it is worth the price.

More Sugar

Announcements of new sources of sugar follow each other with surprising frequency. At a time when the world is much over-supplied with sugar, and when means of curtailing the output of the cane fields are sought, new sources of supply are coming to light. Already we have mentioned in these columns several new sources of sugar as the result of recent research work. The latest is the announcement of a practicable method of manufacturing invert sugar from grapes. Recent news despatches state that experiments have been under way for about six months and that it is expected that 100,000 tons of grapes will thus be utilized this present season.

Here again we have a case where research has opened new outlets for an agricultural product. Honey is in urgent need of similar attention.

A Knife to Which Wax Will Not Stick—for Cleaning Frames and Cutting Combs

By A. V. Small

WAY back in July, 1929, on page 345, there appeared an article on chunk honey in the American Bee Journal, written by myself, in which is stated the following:

"In cutting out chunk honey we leave one row of cells at the top of the frame. The frames are put back in the supers and the next day these supers are put back on the bees. This one row of cells, if the flow is sufficient, serves as a starter, and if the supers are not needed for storage, the bees clean up the frames. When the supers are removed in the fall, the frames are dry and ready to scrape, in preparation for the next season. This one row of cells, if not used the current year, will become soiled with propolis and will not do for the following year."

While scraping frames sounds simple, there is a chance for a good deal of lost time in the operation. With extracted honey prices ranging from 6 to 7 cents a pound, it is evident that we must maintain a high degree of efficiency in all of our work or just quit producing.

In studying how to scrape frames, we have worked out a way so the frames can be scraped on all sides with the greatest ease, as far as scraping the wood is concerned, and with the least changes in the position of the frame. When we start one of our helpers to scraping, we have all of the supers piled out before him at one time. His job is to scrape and clean the super frames for chunk honey for the entire season. We try to impress on him that there is a lot to do and that he should make good time with the work and keep at it.

Then we show him how to hold the knife and how to make the strokes; how to clean each frame, how to hold it, how many times to turn it; give him a pencil and paper and ask him to make a report each night of the number of hours worked and the number of frames scraped. Of course, the first day the number will not be large, but at the end of the third day he ought to have a pretty good degree of efficiency and turn out twice as many per hour as he did the first day.

We have found that the knife blade becomes gummed up with wax and a good deal of time is consumed in scraping this wax off. If we could just find something that wax would not stick to and coat our knife blade with that, our trouble would be over.

After trying everything we could think of, we found a substance to which wax will not stick, something with which we are all familiar. The dentists use it in filling our teeth; a bright, shiny little metal that is never still—quicksilver.

As you know, this is a heavy liquid and it just will not stick to anything except a precious metal. In placer mining, quicksilver is used in sluice boxes because it sticks to the particles of gold as they come down the sluice.

I reasoned that since steel is our most valuable metal in common use, quicksilver ought to stick to steel quite tenaciously. But, try as I would, the gay little globules of quicksilver would have nothing to do with my steel knife blade. They just rolled around on its surface as they do on a sheet of paper. I tried all kinds of acids from the local drug store, but the saucy little globules of quicksilver paid no attention. The only result was a badly discolored blade.

Did you ever get your truck loaded with nicely filled supers of honey during robbing time and then discover you had a flat tire? Well, the remarks addressed to that quicksilver would have been very appropriate on just such an occasion. Right in the middle of it, when the air was getting good and blue, the preacher came in.

Some people have the quality of saying the right thing at the right time, but, by gosh, I never did. This was a dickens of a mess. But the reverend was a man of long experience, and when I began to apologize he just said "Forget it; that isn't any worse than I hear on the golf links every time old Deacon Jones makes a poor shot." "Well, what do you say when you make a poor shot?" I asked. He looked very solemn as he replied, "I don't say a thing. I just spit in the grass and the grass never grows there again."

A fiendish idea took possession of me. Here was something more corrosive than strong acid. If I could just get him to spit on that knife blade!

As I shifted my position, the piece of railroad iron I had been using to clinch nails on slipped off the bench and fell on his foot. Like the flash of a serpent's tongue he spat through his teeth and I caught it squarely on the knife blade. While it was still sizzling I plunged the blade into the dish of quicksilver. When I pulled it out, a second later, the dull steel was radiant with an even silvery coating!

At last we had a good steel blade that would slip through an old, tough brood comb almost without friction, a blade to which wax would not stick. You can scrape for half a day without cleaning the wax off. A blade that slips over the wood and wax as though it has been greased, and yet there is no grease. The use of this knife actually increased our efficiency 10 to 20 per cent.

Of course, the quicksilver finally wore off. I didn't dare try the preacher again, so I asked the local druggist what was the most corrosive substance he knew of for killing grass. And what do you suppose he said? Blue vitriol! Yes, sir, blue vitriol dissolved in rain water. Apply with a soft cloth; use a little very fine emery dust and rub gently, then coat with quicksilver, and hurrah for a wax knife that will not stick.

Kansas.

A New Cooperative in Texas

Through the efforts of H. E. Coffey, field agent of the Federal Farm Board, a new honey selling cooperative has been launched in Texas, to be known as the Lone Star Honey Producers' Association. Mr. F. W. Biggs, of Manchaca, Texas, has been appointed sales manager The membership and interest is gradually increasing. There is a marketing agreement which binds the members by contract. A simple set of grading and packing rules has been adopted, providing that each pail or jar shall contain the full net weight of honey stated on the label, and setting up two general classes of honey, No. 1 Texas and No. 2 Texas. No. 1 Texas is to be amber in color, or lighter, and of any flavor not bitter, burning, or otherwise unpleasant. No. 2 Texas, any honey which cannot be classed as No. 1. All No. 2 Texas honey produced by Association members must be packed as extracted honey.

Only No. 1 Texas comb honey may be packed by Association members. Each pail or jar of bulk comb honey shall contain 40 per cent or more by weight of honey in the comb, and only freshly made white comb shall be used, of which all cells are capped, and No. 1 Texas extracted must be used to fill in the containers.

Under the marketing agreement, the Association buys and the producer sells to the Association all of the honey, honey products, produced or acquired by him for a term of ten years. Any member may cancel the contract by notifying the Association at any time after the first year, if he is free from indebtedness to the Association, and the Association free from indebtedness to intermediate credit banks or Farm Board.

The Association plans to pool the honey of the members, grade it, store it, borrow on it for loans, and when final sales are made all costs are to be deducted, interest paid and net balance distributed among the producers who have made delivery to the pool from which the honey has

been sold. All selling is entirely in the hands of the Association.

The business of the Association is to be exercised by a board of directors of seven members, elected annually at the regular meeting, to serve without compensation, and this board shall conduct the affairs of the Association. The present board of directors are: H. E. Coffey, H. A. Victor, T. W. Burleson, Clarence W. Delany, L. R. Nolen, A. M. Pattenson, and W. R. Jordan.

Lenawee County Leads in Michigan Beekeeping

Lenawee County, in the southeastern part of the state, is Michigan's leading beekeeping county, with 550 beekeepers and 6240 colonies, producing annually nearly half a million pounds of honey. They have a strong county association which goes the limit in the support of the state inspection. **The members have been assessing themselves 10 cents per colony to supplement state and county funds for inspection work.**

At their meeting in Adrian, March 27, it was proposed and strongly supported that a state law be passed to eliminate the property tax on bees and assess them 10 cents annually for support of state inspection purposes. This would yield about $20,000 and should be supplemented by an equal amount of special appropriations by state and county if needed. It was pointed out that only 50 per cent of the colonies are at present on the assessment rolls; the rest are assessed at $2.00 to $7.00, which is obviously unfair.

Honey was reported as about all cleaned up and no carryover probable.

M. N. Dillon,
Michigan.

Nebraska Prospects

Nebraska conditions seem to be very good. Early mild weather stimulated brood rearing and caused heavy consumption of stores. More or less spring feeding is being done. A few have starved out and recent cold weather may have resulted in some chilled brood, particularly in cellar-wintered colonies which were taken out early. However, I believe conditions are normal or slightly above.

O. S. Bare.

The Honey Producer

The first issue of the official organ of the Honey Producers' League under the editorship of Secretary Milum is out. It is the kind of publication that an official organ should be, filled with news about the activities of the organization.

Doings in the Northwest

By N. N. Dodge

Wurth Completes California Tour

Mr. Daniel Wurth, pioneer Northwest beekeeper, returned March 10 to his home in Wapato, Washington. He spent the winter months with his son, Carl Wurth, at Riverside, California. During this time he accompanied his son on many of his trips of inspection. He reports one drive of 320 miles to inspect forty colonies of bees. He attended ten county beekeepers' association meetings, the California State Beekeepers' Association meeting at Chico, and met many California beekeepers. Mr. Wurth reports that bee disease conditions in California are unquestionably improved since the aggressive campaign for disease control has been launched. He plans to be in the field with his bees especially early this year because of the forward spring, and is looking for a young married man to help him with the work throughout the summer.

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Sears-Roebuck Features Live Bees

Much interest is being shown by customers of the big retail store of Sears, Roebuck & Co. in Seattle in the two displays of live bees being featured during the month of March. According to Mr. H. F. Smith, manager of the store, these displays are drawing big crowds in the bee supply department and on the main floor of the store, where honey is being sold.

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Hard Work Insures Washington Inspection Appropriation

Through the untiring efforts of the Legislative Committee of the Washington State Beekeepers' Association, consisting of President Mommsen and Fred Mandery, the annual appropriation of $4000 for bee inspection work in Washington, stricken from the budget by the last Legislature, was replaced before the Legislature adjourned. Washington beekeepers are greatly relieved at the news that the excellent work of Dr. R. L. Webster, state entomologist and supervisor of apiary inspection work in Washington, will be continued through the appropriation of this fund, which enables the county bee inspectors to maintain their inspection and clean-up programs.

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Wetter Than Wet—This Spring

Following an unusually dry fall and winter, spring in western Washington has been wetter than average, according to statements of the weather bureau at Seattle. Bees in protected locations have built up to nectar-gathering strength by early April, and beekeepers in favored districts expect to gather some surplus from maple bloom. Julian Joubert, of Enumclaw, reports one yard of thirty colonies in such good condition that he will put on comb honey supers for the maple flow if weather indications point to warmth and sunshine while the maples, both broad leaved and the vine variety, are in blossom.

— o —

"Honey Fluff" to Be Manufactured by Mountain States Association

The new honey product, Honey Fluff (mentioned on page 118 of the March American Bee Journal) is attracting considerable interest in Puget Sound cities, according to Mr. Charles Brittain, manager of the Pacific Slope Honey Company, which is manufacturing and packing Honey Fluff for the Mountain States Honey Producers' Association. The big co-op purchased the manufacturing rights of this product from Dr. C. R. Mames, who developed and perfected the process of manufacture. Several wholesale grocery houses are distributing the new "fluff," which went on the market early in March. It is not yet known how it will be received by the consuming public.

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Joubert Says "Bring Your Pick and Shovel"

Julian Joubert, of Enumclaw, Washington, requests that any beekeepers coming to visit him during the spring bring along a pick and shovel. He states that as early as February a chorus of frogs were occupying the firebox of the boiler in his honey house and that he is going to have to do some digging of drainage ditches before extracting time.

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Cox Reports Fine Winter in Southwest Washington

Bees wintered especially well in southwestern Washington. Mr. W. L. Cox, bee inspector of Grays Harbor County, reports that the mild winter and early spring brought the bees through in fine shape, with a much below normal mortality from starvation among the colonies of beekeepers who were careless in checking winter stores last autumn.

— o —

Mountain States Seed Growers Organize—Did the Bees Help?

Organization of the Mountain States Seed Growers, a cooperative marketing agency to handle the alfalfa and clover seed produced by farmers of the Boise Valley of Idaho, was announced on April 10. The organization plans to extend its territory into eastern Oregon and southwestern

(Continued on page 221)

How to Make That Top Entrance

By H. A. Insinger

Figure 1

WELL, that article of mine in April on the top entrance started an avalanche. The American Bee Journal has forwarded letters to me and has retained quite a number of unanswered letters. Quite a few want to know how to make a top entrance. These pictures show how it is put together, step by step. They give you a good notion of how to make a "topper."

None of my vestibules are just alike. For instance, I use my judgment in cutting out the floor pieces, and the exact number of pieces, the number of beeways, and the number of holes in the floor depend on the scrap lumber I have handy.

The larger beeways, I believe, should be to the rear and the smaller ones to the front, and be sure to have the hole for the bee escape in the ceiling come above one of the large beeways in the floor. Also, several beeways are to be preferred. There should at least be a hole near each corner of the vestibule, for moisture may condense there and cause trouble. At least that's the way I figure it.

I make my vestibules heavier than is necessary. The ceiling is of ⅞-inch lumber, but I think full half-inch material would do just as well. The material in the picture is ⅜-inch. I wintered one colony with ⅜-inch ceiling without any other protection except the regular hive cover, and the bees came through all right. Yet I think a heavy ceiling will more readily prevent condensation of moisture than a thin one. Also, thin ones may warp. So I think a half-inch ceiling is better under ordinary circumstances.

The pictures tell their own story. You can make and try as many "toppers" as you want to, since this is appearing early enough to give time to construct them. I have given you my experiences. Now let's see what you find out.

Figure No. 1—The inside rim. The same dimensions as the **inside** top measurement of your hive; ⅞-inch material. Wide enough to leave room to nail on it both the floor and the ceiling (Fig. 2) and to allow a bee space between the latter and the edges of the outside rim, shown in Figure 3, which is just 4 inches wide. The inner rim shown in this picture is 2⅞ inches wide and the ceiling

Figure 2

and bottom (see Fig. 2) are of ⅜-inch lumber.

The two short pieces to form the front of the vestibule, one of which is held by the hand of the man nailing in the above picture (best seen under the hammer in Fig. 2), are to provide the opening of the vestibule—8 inches wide.

Figure 2. This shows how the boards forming the floor or the bottom of the vestibule are made—short width pieces, the two back ones with 3-inch holes bored in them, as shown. The second strip from the front with 2-inch holes, and front strip with two ½-inch holes. (Note how the entrance is shaping up.) The back slot, or beeway, is an inch wide; the next one in front, toward the hand, is ½ inch wide, and the front one about ⅜ of an inch wide. The ceiling, or top, is shown in Fig. 3.

Figure 3. The outer rim being nailed on (⅞-inch material). Note the bee escape hole in the ceiling of the vestibule which faces you. This outside rim is 4 inches wide. When it is on, your vestibule should be the same dimensions as the **outside,** top measure, of your hive. It should also allow a bee space between its top and bottom edges and the ceiling and the floor of the vestibule, respectively. The short pieces, to close up the front of the outer rim, on either side of the entrance hole, are shown in Fig. 4.

Figure 4. The two short front pieces are just as long as the two inside short front pieces of the inner rim, to which the floor and ceiling are nailed, as shown in Fig. 2. Above and below them are two ⅝-inch strips (from ⅞-inch lumber) nailed all the way across the front. The pieces at the sides of the entrance, the short front pieces, one of which is held in the hand above, are nailed to these strips.

Figure 5. The Insinger top entrance in place on the hive. The regular bottom board is used, with the deep side up and the entrance tightly closed. The beeways and holes in the floor of the top entrance face the frames in the hive. If more clustering space is needed, raise the cover of the hive and slant it back. That gives more ventilation, too. In this picture the cover is in its regular position.

Figure 6. This shows how the supers of honey are placed on top of the top entrance, so the bees will go

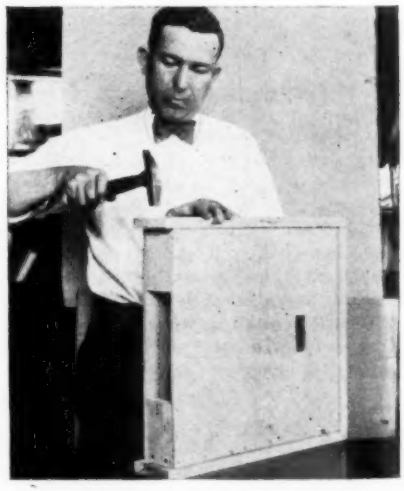

Figure 3

down through the escape provided in the ceiling (Fig. 3.) It also shows the full opening into the vestibule. Compare it with Fig. 5.

With the top entrance in use, of course, the hive arrangement is to

Figure 4

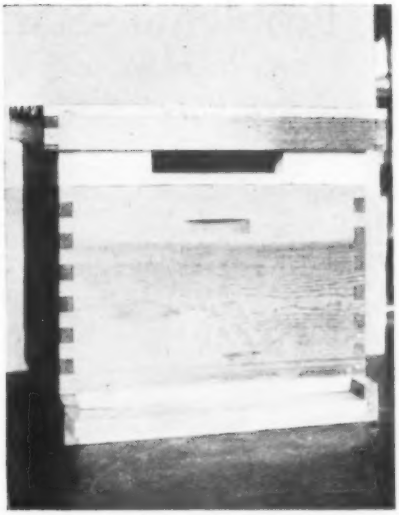

Figure 5

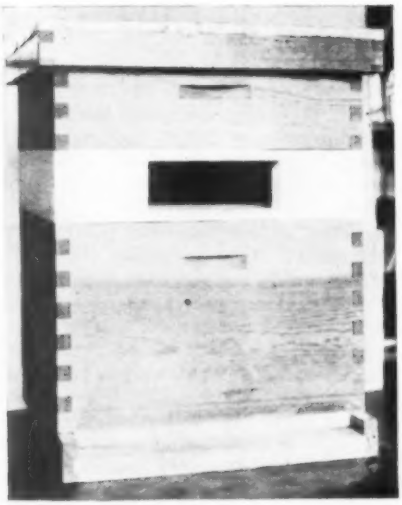

Figure 6

have the brood nest underneath, and the supers below the brood nest, adding new ones just under the brood as needed.

Bees Given Preferred Attention at Chicago Express Office

My attention has been called to an article on page 113 of the March number, "Shall It Be Express or Parcel Post?", by Lee Stewart. The article is written in a spirit of fairness, but one statement we think a misunderstanding, or perhaps based on a shipment not representing the true service of express.

Mr. Stewart says that it takes practically all day for an express shipment to be transferred at Chicago. The fact is that we have at Chicago a very systematic and prompt transfer service, so shipments are transferred to trains which make the best time delivery to consignee.

Bees and other live shipments are given preferred attention and transferred to the first train on which they can be handled satisfactorily. We are able to use any trains which handle mail, and I think a real test would show that shipments of bees moving in our service make as good time as when carried by mail.

J. H. Butler, General Manager,
Railway Express Agency,
New York.

Don't Wait for the Inspector

Where American foulbrood is prevalent in a neighborhood, the wise bee man will inspect all of his colonies carefully every two weeks and treat or destroy every infected colony upon the appearance of the first diseased cell. The fellow who is able to detect foulbrood and waits for an inspector to tell him his bees are rotten ought not to be keeping bees.

E. S. Miller, Indiana.

Swarm Prevention—Can You Answer?

What is the effect of removing brood in comb and replacing with empty frames with starter, with full sheets or with empty brood comb?

Will this removal of brood in comb not have a tendency to intensify, pro rata, the nurse bees to the point of starting queen-cells or perhaps worse — supersedure cells — on the remaining brood and comb?

If any brood is thus removed, what per cent of all brood in the hive should be removed?

J. H. Sturdevant.

Cottage Cheese—As Made by My Better Half

My attention has been called to an item in your March issue in which a subscriber wants to know how to make cottage cheese. My wife makes excellent cottage cheese, and here is how she makes it:

Milk is allowed to sour to such a stage that the whey can be noticed as being distinctly separated from the curds. This stage of curdling should not be hastened by heating, or the curds become hard and sandy. Nor should the milk be allowed to become too sour. A little experimenting will teach the maker just when the right stage has been reached in the souring process.

Then skim the cream from the milk, as the cream may be a little bitter and so make the cottage cheese have a slightly bitter taste. Pour the soured milk into a thin muslin bag, like a sugar bag or a flour bag, care having been taken to get the colored letters washed out of the bag before using it. Tie a string around the top of the bag and hang it up over a vessel to catch the whey as it drips out of the bag, over night. When the whey has stopped dripping, by morning, empty the curds into a mixing bowl and mix a small quantity of sweet cream with the curds, mixing it thoroughly to make the whole of a smooth consistency, and the cheese is finest ever.

Milk can be soured best by the use of pure culture Lactone tablets. These tablets are made by the larger firms of makers of pathologic cultures, like Parke, Davis & Co., of Detroit, Mulfords and others. They can be procured through the drug stores, but are seldom carried in stock, because they must be used when fresh, or reasonably fresh. They are all dated by the makers, limiting the time in which they should be used. Directions for the use of the tablets for the making of buttermilk call for the addition of water, but I never use water, preferring not to have the buttermilk diluted.

William Hahman, Pennsylvania.

Doings in the Northwest

(Continued from page 219)

Idaho. The fact that this section of the intermountain region is the center of beekeeping operations in the Northwest explains to some extent the $2,500,000 worth of alfalfa and clover seed annually produced.

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Buck Elected Vice-President of the League

Northwest beekeepers congratulate Mr. Floyd Buck, of the Carl F. Buck Company, honey producers and bee supply dealers of Walla Walla, on his recent election as vice-president of the American Honey Producers' League. Mr. Buck is a consistent attendant of the majority of beekeepers' gatherings throughout the Northwest and has done much to popularize the old army game, "passing the buck," at beekeepers' conventions.

Our Biggest Problem—Standardization

By Lee Stewart

THE biggest problem in beekeeping history now faces the American honey producer — standardization. Everywhere we hear the cry, low prices, no sales, depression, and a thousand other ills—everything but prosperity. Many localities report no sales even in the face of low prices, a condition always to be found in a wavering, price cutting market. It is not a case of depression when sorghum in an unsightly pail sells for 69 cents a gallon and on the same shelf a nicely labeled ten-pound pail of honey goes begging for 59 cents.

I am reminded of a story I heard when a boy, of a thrifty old farm woman who served meat for the noonday meal that had outlived its usefulness. On noticing the meat had gone untouched, she said that they **would** eat it, and proceeded to make it into hash, which was greedily eaten at the evening meal.

Now that's just the trouble with the honey situation today. We have been trying to induce people to consume our crop of honey just as it comes from the hive, and many do not like raw honey for various reasons. Seldom do you find anyone who can eat it in quantity. Its very richness and deep flavor make it a delicacy and not a quantity food.

We are told the annual American consumption of sugar is over one hundred pounds per capita. Is this consumed in the raw state, just as it comes from the bag? Of course not. I doubt if the annual consumption of raw sugar would reach the small figure of one ounce per capita. But a good many of the things you eat or drink are seasoned with sugar in some form.

Here, then, is the good principle, used by this farm woman and highly developed by the sugar interests, which we honey producers must adopt if we hope to dispose of our honey. If the public will not eat it as it comes from the hive, it must be fed to them in some other form.

This is the thing that the American Honey Institute has been doing so admirably for us. It has awakened the world to the health qualities of honey; has induced others to advertise it; it has shown the American housewife a thousand ways in which she can use nature's own sweet in her every day cooking. In fact, the Institute has been so successful in advertising the use of YOUR honey and MY honey that it is not possible to send recipes and information to all who ask for it without our help.

Like all other progressive ventures, this new demand for honey has brought new problems, so we have standardization right at our front door. It is here sooner than expected; in fact, many of us who thought of honey as something to be used only on hot cakes and biscuits, had never even dreamed of such a thing as honey standards.

Which side of the fence are you on? Mr. Stewart represents a large number of beekeepers. Apparently Mr. Bohne (March, "Honey Is All Right Just as It Is") represents a large number, too. We have replies from both viewpoints—that honey should be standardized—and that it should not.

Read what Stewart says.

Recently I saw a half dozen samples of extracted honey, all alike in color, but no two alike in flavor. There is the case of the housewife who made a big howl when her second order of honey—and mind you this is the order that pays—made a cake not at all like the first one. Right there is the problem, to see that the housewife gets the same honey with each and every purchase. It makes no difference where or when she buys sugar, in California or New York, it's always the same and always gives the same results.

But we know this is not true of honey. Every locality has its own peculiar characteristics and the same locality will often produce a different honey each year, due to climatic and floral conditions. Even the same flora will not produce honey of the same color and flavor.

As I said before, it is the biggest problem in all beekeeping history, but it is one that will have to be solved if we hope to dispose of our surplus, and most certainly it must be solved if we ever hope to increase our production. It may mean the passing of the little beekeeper but we must spare no cost to see that the good housewife gets the same grade and the same quality of honey today that she got last week and the week before.

It looks to me, though I admit my vision is short, that comb honey will never pass this test. At its best it will be a local product and for local consumption. For we know that every flower produces its own particular flavor, and this varies with climatic conditions. There is no way we will ever be able to make clover honey out of buckwheat, nor orange comb honey out of heartsease. It looks as though we would have to market comb honey "as is," ust as the bees deliver it to us, which may in time materially curtail comb honey production.

Extracted honey presents another view and there lies the salvation of the honey producer. Where comb honey will have to be marketed just as the bees turn it over to us, the extracted product may be so blended that the consumer will get identically the same honey today that she got last week and the week before.

That is our problem. How are we going to assemble these various kinds and grades of honey, through what agencies, and by what methods of distribution shall we send them out to the market.

The solution may mean the relief of distribution, taking it out of the hands of beekeepers, but in any case honey will have to be standardized if we hope to dispose of the present crops and most assuredly if we hope to increase.

We will have to get away from the idea that the public can and will consume the crop in its natural state. The American Honey Institute is doing a wonderful work in creating a market, a fact which brings us face to face with this very problem. Who is going to be the Moses of beekeeping to lead us out? Will it be possible for each and every beekeeper to make a standard blend and do his own marketing or will it have to be left to the selling agency? If it is left to a selling agency, how will it affect local demand, which normally takes a big part of the average crop?

I admit I do not know, but I do know that the problem is here, right at our front door, and if we want to keep the ground gained it will have to be solved. I am confident it can be done.

Indiana.

The Value of Demonstration Apiaries

By Don B. Whelan

THE best method of teaching people how to do a thing is by means of demonstrations, showing them better methods of operation. If you tell a group of beekeepers how to transfer bees, or how to prevent swarming, they must translate your words into their own habits and into their own procedure. In so doing some of the vital points of your methods may be lost. If, however, you show them how as well as tell them about it, leaving the results for them to see for themselves, you have made a very convincing argument. They will see that your methods have advantages and they are bound to profit by them.

That is the way with demonstration apiaries. They are a double-barreled help in teaching the amateur beekeeper how to get results. They help the demonstrator to reach most of the interested beekeepers of the county with little loss of time and effort on his part. They also get the beekeepers together so they can organize a county association for mutual help and profit.

The use of letters, bulletins, or even the radio, will not always show a beekeeper how to better his methods. But these things together with demonstrations will surely force the lesson home. When the amateur beekeeper witnesses improved methods and sees the results in comparison with his results, his skepticism vanishes.

In Nebraska the demonstration apiary plan was started in the spring of 1930, under the leadership of O. S. Bare, the extension entomologist. In his work he uses the Iowa plan, which has worked so well for the past ten years. Last year demonstration apiaries were held in six counties in the eastern half of the state. These were Lancaster, Saunders, Merrick, Hamilton, Custer, and Buffalo counties. The plan of operation was to locate these demonstrations at the apiary of some progressive beekeeper whose bee yard was centrally located. Ten good average colonies were selected and set aside for demonstration work. In doing this no attempt was made to select exceptionally strong colonies. Average healthy colonies were the ones usually chosen.

The owner on his part agrees to furnish all of the equipment necessary for producing extracted honey and pays all of the necessary expenses of the colonies. The aim is to have all of the hives uniform—that is, either standard, Modified Dadant, or Jumbo, the standard ten-frame hive being preferred. The owner also agrees to handle five of the demonstration colonies with exactly the same methods as he uses with the remainder in his apiary. The other five colonies are turned over to the specialist. He uses these colonies in all of his demonstrations throughout the year. Between demonstrations they are cared for by the owner according to directions given by the specialist. Records of operating expense and the amount of honey produced by each colony in both sets are kept for comparison.

During the season four demonstrations are held at each of the demonstration apiaries. The first meeting is held between April 20 and May 10. This is called the spring management demonstration. At this time each hive is opened, the amount of stores noted, feeding is done where necessary, and the brood is examined for signs of disease. The queens are clipped, or the colonies requeened if that is necessary. After this overhauling, each colony is supplied with a second brood chamber. At this meeting other things are taken up, such as the assembly of equipment, swarm control and the identification and eradication of American foulbrood. The second demonstration of the year is held between May 25 and June 15. At this time the hives are again opened, the brood inspected for any signs of disease, and all of the queen-cells removed. The stronger colonies are then demareed. The queen and emerging and well capped brood are placed in the lower brood chamber, over which a queen excluder is placed. Above this excluder is set a super of drawn combs or full sheets of foundation, and above this a second brood chamber. Swarm control is again discussed and methods of supering are explained and demonstrated. At all of these demonstrations an effort is made to have the beekeepers present assist with the work.

The third demonstration is held between July 20 and August 15. This might be called the requeening demonstration. Several methods of queen introduction are used. The method of extracting honey and a discussion of marketing are taken up at this time as well as methods of building up the colonies for winter.

The fourth demonstration of the year is held between October 10 and November 1. At this meeting, fall feeding and winter packing are taken up. Mention is made at this time of marketing.

A summary of the production of the six yards shows that the demonstration colonies produced an average of 206 pounds per colony. A comparison of these records with those of many beekeepers living in the immediate neighborhood of the demonstration apiaries showed these records to average about 75 per cent higher. In every case where these meetings are held the interest is great and the local beekeepers are very much interested in continuing the work for still another year. The demonstrations have been the cause of the forming of several county beekeepers' associations. It has also been learned that they have greatly helped in the eradication of diseases in the localities where they are.

This year Mr. Bare plans to add to the number of demonstration apiaries by adding about twelve more in central and western Nebraska. These will be held in Valley, Dawson, Hall, Lincoln, Buffalo, Custer, Morrill, Scotts Bluff, Dawes, and Sheridan counties.

A Little Surprise from Your Daughter, Mr. Schmertman

The picture here of Lewis Schmertman, of Freeport, Illinois, was sent to us by his daughter, Miss Anna Schmertman. She says in her letter: "This is to be a complete surprise to my father and I know it will please him."

Well, why shouldn't we tell our readers how this good old beekeeper looks? He has worked among the bees over sixty years and has had his own apiary for fifty-three years.

The best part of it is, Mr. Schmertman has always kept up his apiary in wonderful shape along with his farming, continuing a keen interest in the most modern methods of keeping bees, strict requeening and absolute attention to healthy colonies.

Although 75 years of age, he is still an active worker among the bees, attending the meetings regularly, and reading books and papers. He is a member of the Stevenson County (Illinois) Association and the Illinois State Beekeepers' Association.

AMERICAN HONEY INSTITUTE
FOUNDED 1928
BEE INDUSTRIES ASSOCIATION OF AMERICA
CHAMBER OF COMMERCE BUILDING
INDIANAPOLIS

DR. H. E. BARNARD, PRESIDENT

Honey in Dorothy Dix's Letter Box

In Dorothy Dix's sound advice to the question, "How can the friendless girl become popular?" she gives, among other suggestions:

"So if you want people to seek your society, **put honey on your lips** instead of gall. Tell them pleasant things and they will eat it up and ask for more."

Good advice, isn't it? And so American Honey Institute would put honey into your stomachs, too. And the Institute is sending such suggestions to hundreds of home makers all the time, and more and more we hear folks say, "We are eating the honey way at our house."

Holland Honey Cakes

Who has the recipe for genuine Holland honey cakes? A request for this combination comes from the secretary of a county association, and the Institute having honey recipes from France, Italy, England, and Spain, but not from Holland, would appreciate receiving this recipe if anyone has it.

Another Honey Broadcast on a National Hookup

When the Great Atlantic and Pacific Tea Company first started their food talks over the National broadcasting chain last fall, American Honey Institute took the liberty to compliment their food colonel on the historical background he built around the food he was exploiting, at the same time suggesting the fact that honey was our oldest sweet, that it was recorded in ancient writings in many interesting ways, and that, while it was our oldest sweet, it was still the best, sending at the same time such Honey Helpings as were available. Correspondence was exchanged, with the result that the general advertising department of this great company wrote that they would include a honey talk in their Food Colonel's Series. This promise was a reality, for on March 19, at 7:45 a. m., central standard time, this honey talk came through and many of our members and friends wrote us that they heard it. Those of you who heard it know what an excellent boost it was for honey and must realize that it cost the Great Atlantic and Pacific Tea Company several thousand dollars for the broadcasting, whereas it cost you only what you have contributed to the Institute. If you heard it, won't you write Maurice V. Odquist, General Advertising Department, the Great Atlantic and Pacific Tea Company, Graybar Building, 420 Lexington Avenue, New York City, and tell him you enjoyed it?

Invitations to Demonstrate Honey

American Honey Institute has been invited to give demonstrations on the uses of honey ten times this past month. These requests came from home economics project club leaders as follows:

(Continued on page 234)

Dr. L. H. Pammel

News despatches conveyed the word of the death of Dr. L. H. Pammel on a train, near Ogden, Utah, on Monday, March 23. Although Pammel was not a beekeeper, he was interested in bees since boyhood and spent a great deal of time in studying the relationship between the honeybee and various plants. He contributed an occasional article for the American Bee Journal, usually relating to honey plants. The first of these appeared many years ago, when he was still a young man on a Wisconsin farm.

For the past ten years he has been engaged in a study of the honey plants of Iowa, and a bulletin on that subject is now in press by the Geological Survey of Iowa. It will be a very large volume, we understand of about 1000 pages, and will contain much detailed information of interest to scientists and investigators. In appreciation of this special study, he was elected an honorary life member of the Iowa Beekeepers' Association. He frequently appeared on their programs and was well known to the bee men of the Middle West. Not many scientists have maintained an interest in bees over such a long period.

Doctor Pammel was author of a large volume on poisonous plants which occupies a field all its own. He was also author of "Weed Flora of Iowa," a book of 700 pages, which has been widely distributed and served a useful purpose to a large number of people. His "Grasses of Iowa" was published in two volumes by the Iowa Geological Survey some years ago. In addition, he published a large number of scientific papers.

The writer knew Doctor Pammel for many years and came to feel a great admiration for him. The doctor was quiet and unassuming, and gave much of his time to public work. His greatest contribution, the writer would judge, was to the movement toward securing state parks. I well remember how he called a meeting about twenty years ago to start this movement. Those who were known to have an interest in conservation were invited and about a dozen came together at the old Savery Hotel in Des Moines. We all wanted to see something done to provide wild life refuges and to save a remnant of Iowa wild flowers, but there was little prospect of success at that time. Pammel, however, had a vision of accomplishment so large as to make it seem impossible of realization.

This object, which then seemed to be little more than a dream, has been realized to a far greater extent than any of us then thought possible. Doctor Pammel was the first chairman of the state board in charge of parks, a position which he held for several years, until failing health compelled him to resign. Iowa now has a great system of state parks with thousands of acres devoted to wild life refuges and recreation grounds for its citizens. Those of us who have watched this movement from its beginning feel that its success is largely due to the leadership and devotion of our friend who has so recently gone from among us.

Although Dr. Pammel had not been as vigorous recently as of old and had relinquished much of his work, he was still busy and active and his death was unexpected. He spent the winter, in company with Mrs. Pammel, visiting a daughter in California, and was on the way home to Iowa when his death occurred.

Frank C. Pellett.

Packing and Marketing Statement Shows Substantial Gains for Honey Marketing

By R. B. McCain

The first statement of Packing and Marketing, Inc., which is the legal name of the almond growers cooperative engaged in the marketing of agricultural products other than almonds, was sent to honey producers throughout the state, recently.

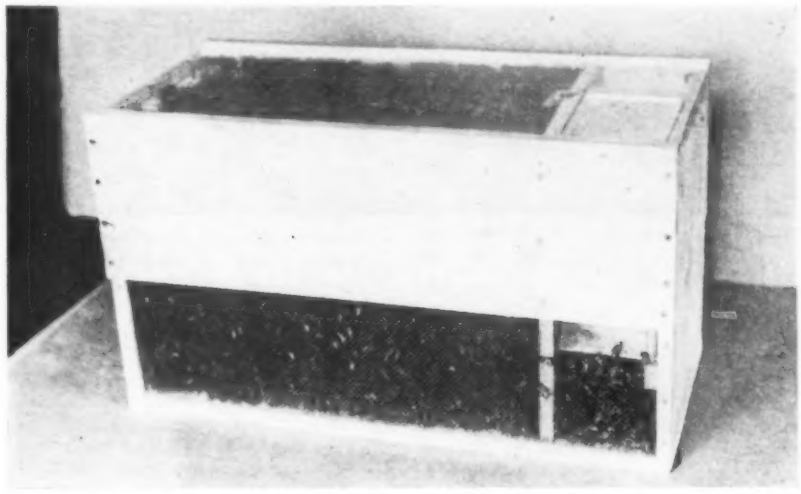
"Packing and Marketing feels that despite the adverse conditions under which it entered upon the undertaking to sell honey for the pools formed under its auspices, a substantial basis has been established for better marketing conditions for California honey."

The foregoing is the only positive statement of progress made by this corporation after one year of experiment in tme marketing of honey. Whether the venture has proved profitable to those who signed the nine-year markeing agreement, there is no intimation. The absence of such a statement cannot be made a subject of criticism, because this corporation is not under obligation to tell the public its private business. But a careful reading of the statement that was issued leaves the impression that Packing and Marketing, with all its equipment and organization, as well as its many contacts with the trade, both domestic and foreign, is in practically the same position as everyobdy else who has tried to market honey during the past year.

The statement puts great emphasis on the need of cooperation and organized effort on the part of honey producers of California, and adds the following: "If the honey producers of this state are forced into a cooperative organization, it will be doomed to failure from the start." This report says that the only remedy that will ever bring relief to the honey producers is "organized effort." The organized effort referred to is the pooling of the entire crop of California, or a large percentage of it, under the auspices of Packing and Marketing, Inc. In other words, the remedy is "organized effort" without "cooperative organization." A statement of this kind sounds rather strange, coming, as it does, from the management of the Almond Exchange, which is reputed to be one of the most successful cooperative organizations in the state.

It is hard to understand why a cooperative organization is necessarily doomed to failure from the beginning, when there are several successful cooperatives in the state of California, the Almond Exchange among them. California honey producers have been stung so often and so severely that they have no heart for any kind of a marketing agreement that takes the control of their crops out of their own hands. Everybody believes in the theory of cooperation; but too many of us have seen the slaughter of a beautiful theory by an ugly fact. The ugly fact that is guilty of this great crime is mismanagement. If the honey producers of California can forget their differences and rise above the sordid sin of selfishness, there is no good reason why they cannot find the right kind of management to make a cooperative organization successful.

California.

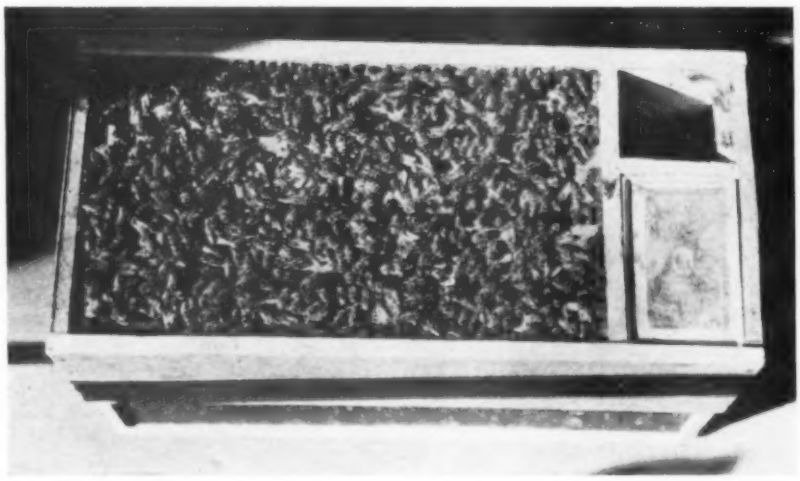


Special package, holding 48 queens in small cages and several pounds of live bees to maintain uniform temperature

Shipping Queens in Bulk

There has been so much complaint of supersedure of queens after being sent through the mails in the ordinary way that it seems worth while to give special care to large shipments. Since some beekeepers buy queens in large numbers, a special cage like that shown in the illustration may prove valuable. It was sent to us from the Stover Apiaries, Mississippi, and contains four holders, each with one dozen queen cages, or forty-eight in all. Each queen is caged in an ordinary mailing cage with attendants in the usual way. The center holders place the cages with backs together, thus providing clustering space for the bees between the cages. Live bees are then shaken into the cage surrounding the queens. There is a can of feed which provides ample stores for the trip. It is thought that the shipment will bring the queens through with far less danger of injury through changes of temperature and also that they should be fed more liberally.

This kind of arrangement is only useful where queens are shipped in considerable numbers and as yet is experimental.



Top of the package. The queen cages are in racks, a single row at either side facing in; and a double row in the center, each facing out. Bees have free access to the face of each cage.

Hives securely stapled and roped on a truck for their long journey to the Wenatchee orchards.

Taking Out Bee Insurance for Washington Fruit Crops

By A. R. Chase, Chelan County Agent, Wenatchee, Washington

THE introduction of bees into the orchards of north central Washington during the past five years has undoubtedly added many thousands of dollars to the income of orchardists in this district. Just what has been their exact value can never be determined, because it is impossible to compel the bees to work on those trees and in those blocks for which they are intended. There is no way of getting a check on the activity of these busy insects except when they are confined by a tent to some particular tree, and in this district we have never checked up that closely. However, the use of bees is increasing each year in this district because we are getting results.

In 1926 the present county agent started a campaign to introduce bees into the orchards of north central Washington. The first year we aided distribution of 450 stands of bees. At that time we gave considerable publicity to the necessity of using bees in order to secure good sets of fruits in our self-sterile varieties of apples, pears and cherries. Each year the interest in this subject has grown and the number of colonies introduced has increased accordingly. In the beginning, the editor of the local daily paper inquired as to the number of bees we might use in this district. We hazarded a guess that one hundred million bees were needed in this district for pollenation purposes. This news was broadcast through the Associated Press and we received offers of a few stands of bees from people living as far as Oklahoma, Kansas, Wisconsin, and North Carolina. However, we have supplied plenty of bees from the various diversified sections of Washington, including Yakima Valley and the coast country, and our supplies are still plentiful to meet increasing demands. Last season we must have reached our one hundred million bee mark, as there were over 3500 colonies of bees distributed in this district.

Now as to the results. "Those who came to scoff remained to pray," as far as the bee business is concerned. Most of the orchardists who secured bees the first season are still enlarging their orders, and many of those who were at first skeptical are now enthusiastic. In solid blocks of Delicious or Winesap or where there is a considerable planting of these two varieties the effect has been quite noticeable. For instance, on Bridgeport Bar the average production of Delicious used to run around 190 boxes per acre. Last year production on these Delicious orchards was nearly 500 boxes per acre. For seventeen years the orchardists of Bridgeport Bar were unable to get even good average crops on their solid blocks of Delicious plantings. They ascribed most of their light crops to frosts. In 1926 very efficient orchard heating methods were adopted, but still no crop. In 1927 Jonathan bouquets were placed in the trees and the trees showed a scattering crop. In 1928 a number of stands of bees were introduced. In the half of an orchard which was pollenized by bouquets there was a very heavy crop—at least four times as many Delicious as in the part of the orchard which did not have bouquets. During the past two years most of the Delicious orchards on Bridgeport Bar have adopted the practice of placing bouquets and bees and the result last season was over 500 boxes of Delicious per acre in that district.

Ora Thomas owns a twenty-acre orchard near Manson, some distance removed from the hills. His average crop in 1926 and 1927 was 8,000 packed boxes on twenty acres. That year the county agent persuaded him to put in bees, and during the past three years his crop has averaged 16,000 packed boxes per acre. Mr. Thomas stated when the county agent first visited him in 1928 that he was constantly going into the red ink side of the ledger because of low production. That is in a district which is perhaps the heaviest producing apple district in the world. Since that time he has practically paid for his orchard, and the bees are certainly entitled to most of the credit.

In 1928 a neighbor also greatly increased his crop and did not use bees. This was just across the fence. The neighbor used fertilizer supposed to have magic power. We were able to understand how Mr. Thomas' bees got over the fence, but we have never been able to understand how the fertilizer on the neighboring orchard could have affected Mr. Thomas' orchard.

The owner of one cherry ranch of ten acres submits this information: Before he used bees for pollenation, the largest crop he ever produced was twenty-one tons. The first year after putting in ten colonies, he produced fifty-three tons. The next year, although he believed it impossible, sixty-four tons of cherries were produced. Another rancher, the owner of 150 acres of apple trees, packed an average of 36,000 boxes of apples a year. He installed one hundred colonies of bees at the blooming time, and at the end of the season found he had packed 80,000 boxes of apples, with approximately 22,000 boxes of apples lost through wind and other causes. Last year his orchard averaged nearly 1,000 boxes per acre.

These figures illustrate the value of cross-pollenation by the use of bees better than any other argument.

Orchardists and apiarists who may be interested in reading our experiences in this district are naturally curious as to just why the need for pollenizing varieties and the introduction of bees into the orchards have become necessary.

When this orchard district was first planted there was a strong tendency to plant the home orchard type of setting with many varieties mixed. Mr. John Peters, veteran apple grower of this district, states that when he took several carloads of apples to the east to market them twenty years ago, he found that he was trying to get prices quoted on about 123 different varieties of apples. In recent years it has been found that this district is well adapted to Delicious, Winesap, Rome Beauty, and Jonathan apples; De Anjou and Bartlett pears; Elberta and J. H. Hale peaches, and Bing, Lambert and Royal Anne cherries. Many other varieties which grow well are being eliminated because of low returns. There is a strong tendency to increase plantings of Delicious and Winesap apples, De Anjou pears, Bing and Lambert cherries, all of which are partially or entirely self-sterile. Bing and Lambert cherries are also intersterile. The Delicious apple will pollenize the Winesap, but the Winesap will not pollenize the Delicious. The Delicious also generally blooms a little early for the Winesap. So much for the variety situation and the tendency toward large blocks of varieties which need cross pollenation.

Now for the bee situation. This district is practically solid orchard for considerable distances, and in many locations the hibernating places for native insects have been destroyed. Only those orchards next to the hills or mountains, where there are hibernating places for insects, seem to have at least a partial supply of bees. In addition to this condition, we have the tendency for heavier applications of arsenicals and spray material. Our orchard districts apply from one to six cover sprays of arsenate of lead during the season. Our orchards also have perennial crops of alfalfa or biennial sweet clover as cover crops. There is also a tendency to apply a Calyx spray before the petals have all fallen. This combination of circumstances all results in poisoning insect visitors to blossoms of trees and cover crops and also furnishes a somewhat hazardous combination for the bees which are placed in the orchard.

Mr. J. L. Swain, well known apiarist of Yakima, says:

"Fruit ranchers have to be educated to the use of bees for pollenation because, up to about the last decade, wild bees have been plentiful. However, since the extensive use of spraying the trees, many of these wild bees have gradually been killed. It has been found that ranchers who hire beekeepers to bring in their own bees, take care of them, and remove them, will have much better success than those who try to handle the bees themselves. It is a specialist job."

Some orchardists do not believe that the bees are worth the price of $5.00 a hive, but most of them agree with the beekeeper that it is satisfactory after they see the results gained or after they have tried to manage the bees themselves. Mr. C. F. Turnipseed, Bryant, Washington, was one of the first beekeepers to install his bees in the Wenatchee Valley apple district for pollenating. He estimates that the cost of transporting the bees back and forth to the orchards, expenses, and hiring help, comes to about $3.00 a hive. His remarks about the "pollinating game" are to the effect that, while the bees are very beneficial to the rancher, the work of the beekeeper is "no picnic." The beekeeper must be familiar with the location of every hive on the ranch, because the bees must be picked up at night; and during the latter part of the pollinating season the irrigating furrows have usually been ditched and consequently the land is very muddy and slushy. Also, it is usually hard to get experienced help, and with inefficient help it is not easy to get the best results. At the end of the blossoming season the beekeeper must keep in constant touch with the rancher, because quite frequently he will be given only one or two days' notice by the orchardist before spraying is started. Of course, if the spraying is begun before all the colonies are taken out of the orchard, the remaining bees may be killed. The orchardist who gives at least five days' notice for bee removal gives the beekeeper a better chance to remove bees without loss.

Mr. Turnipseed now transports his bees across the mountains to We-

(Continued on page 239)

C. F. Turnipseed, of Bryant, Washington, with a carload of bees, arriving in the Wenatchee district for blossom time.

Let the Caucasians Tell Their Story

By C. A. Bird

Professor F. B. Paddock, of Iowa, and the author, C. A. Bird, pictured in the apiary of Dick Wessink.

BELIEVE it or not, I secured my first Caucasian bees from a **tested** Italian queen (bought from a reliable breeder). She was not tested for queen rearing—just looks only. She gave all three-banded bees as evenly marked as peas in a pod, yet she was mated to a Caucasian drone. From this **tested** (?) Italian queen I had built up a pure strain of Caucasians and knew what they were like, when I purchased my first pure queens.

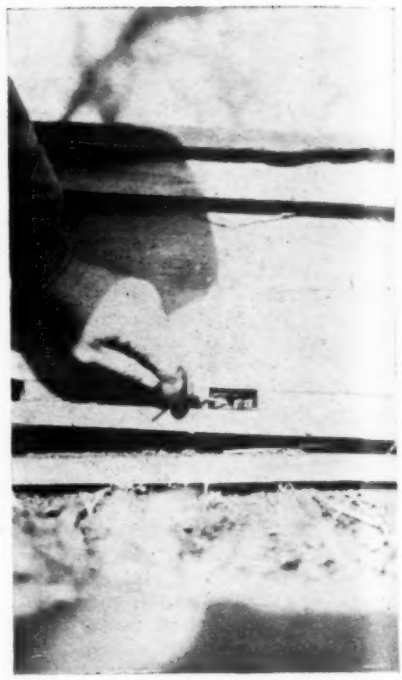
The late lamented Dr. A. F. Bonny, of Buck Grove, Iowa (not very far from here), in speaking of the various races of bees, said: "If the Caucasians had been the first race of bees imported, the Italians would never have been heard of."

The doctor was surely right, for as an all-round bee for general and every purpose the genuine Caucasian bees have no equal. The longer I keep them the better I like them. Some don't like the color, but with their even grey bands they are indeed beautiful. And then again, what is more disgusting as to looks and color than an old Italian? They are certainly not pretty.

To get out and hustle when cloudy and cool, or for orchard pollination, they are superior to any race.

Last spring I saw them work dandelions when it was cloudy all day. At 11 o'clock the temperature was 42 degrees, at 2 o'clock 40 degrees. There was not just a few bees going in and out. They meant business. Most everyone knows that red clover has a deep top root and is not affected by dry weather as is white clover, and keeps on yielding nectar under adverse conditions. The Caucasian bee is all the one of the honeybees that can reach the nectar to any advantage in red clover. I have seen them work both the first and second crop of clover. During the heat and drouth last summer they would work early in the morning and late in the afternoon. At midday there was no nectar in the flowers. Since controlled mating can now be done, I believe that it won't be long until we will have Caucasian bees with tongues long enough to reach nectar in the majority of red clover blossoms.

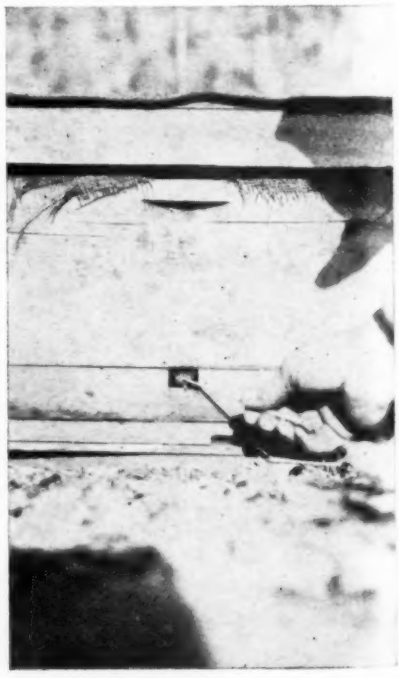
With bees, as with anything else, one almost always hears about the supposed bad points. Take propolizing. I am not familiar with the conditions as regards pests getting in the hives (or trees) in the country the Caucasians originated, but they certainly have been pestered through past ages with something getting in and disturbing them. They have **reasoned** (?) that to build a breastwork at the entrance they could keep



Queen mating nucleus. Note the one small hole where just two bees can go in and out. These were built late in the fall. Before propolizing the flight holes were 3½x1½. (The other black places are shadows.)

Fortifications in fine repair, guns all set. Let anything try to get in. I broke the large hole at the left before I took the picture.

The nucleus below shows only two small holes, where one bee only could pass at a time. These nuclei will never be robbed out, even when queenless.



Top entrance hives, for Caucasians, packed with a layer of Celotex and old tar paper from the year before. One of the hives has a packed empty super on, too. The bees fly earlier in the day when fixed this way.

such trash out. I have never seen where a mouse gnawed through either in the cellar or outside.

If the bottom entrance is reduced early it can be reduced to a minimum, and it can be entirely eliminated by use of top entrances, and I have never found it a hindrance to manipulation even if some do say they tore the bottom boards out trying to get a frame out. Inside the hive no more propolis will be found than in an ordinary hive of Italians, showing that they build these entrances for self-preservation.

Even if they have been tormented in past ages, and built their entrances to suit conditions, the Caucasian bees are the most gentle known. Dozens of people have gone with me into my yard and I have opened hive after hive, taking out frames for them to see the bees, without vveil or smoke and have never been stung, under bad conditions, as they can testify. Some claim they are mean when mated to a drone other than their own race, but did they ever consider what they would have if this same drone had mated with one of their yellow queens? You have all had them and I don't need to name them here. More than half mismated Caucasian queens show the gentleness of the pure race. Coupled with their gentleness is the extreme quietness on the comb when handled. Lift a frame out and every bee stays right there like she was glued fast. It is this quietness that makes the queens harder to find. Take your Italians. You open a hive, if you use smoke or not, the bees start some place if only to fill up on honey. The queen moves slow and is left most always by herself or with very few bees around her and is very easy to see. Try it. Caucasians reorganize very quickly after a hive has been opened, and I have never had one robbed. After manipulation they defend their hive better than other races and no strange bees go in without being looked over, and they do not practice sneak thieving, as Italians do, when they rob, which is very seldom indeed. I saw Italians robbing or sneak thieving during one of the heaviest honeyflows I ever experienced.

For a race of bees so prolific, swarm control is reduced to a minimum if room is given in time. There will be no preparation to swarm under bad conditions either in extracted or comb honey production. It is seldom indeed a colony is ever Demareed. I use two ten-frame hive bodies for brood chambers. Comb honey is capped very white and does not have that watery appearance so often seen. Every article of real merit (even to the exclusive diamond) has its so-called substitute or imitation. But diamonds do not suffer in their popularity or lose their value on that account. Caucasian bees are no exception. They also have their substitutes. You may have heard, or will hear, the old time-worn argument that some other race of bees is **just as good**. But don't be misled. Caucasian bees are in class by themselves. They have an individuality that has made them immensely popular, and that individuality will keep them so. **Stick to Caucasians** and be on top.

Iowa.

Bees Build Combs Both Up and Down

Last summer when removing section supers I placed empty supers under the escape boards for clustering space, not having any frames at hand. As the weather was very hot, to prevent danger of smothering the bees were first smoked down out of the sections. Two days later, in all but two out of twenty hives, combs up to five or six inches in diameter were found built downward from the under side of the escape boards. The bees had also started to build upward from the tops of the frames below. Although not enough nectar was coming in to prevent robbing, there was nectar, or honey, in all these combs. The following day I sampled some of this unsealed honey and found that it tasted strongly of smoke, considerable smoke having been used in clearing up these rogue combs.

Walter H. Hull, Virginia.

The unpacked top entrance hive as I used them (with a little Bird on top). No propolis will be found in a hive with an entrance of this kind. (The corn fodder at the back is for wind protection in winter.)

Would You Like to Rear Some Extra Good Queens?

Well, do it this way: A few days before the opening of the honeyflow, place the brood above a queen excluder. In eight or ten days remove the lower brood chamber containing the queen and unsealed brood. Shake off most of the bees, leaving only a sufficient number to care for the queen and young brood, thus making on the old stand a queen-rearing colony strong in bees but containing no larvæ. Next remove all queen-cells and insert one or more cell bars grafted from your best Italian stock. In ten days these cells will be ready for use in nuclei or elsewhere.

If desired, the brood chamber containing the queen may be returned after the grafted cells are capped. It should not be done before this time, as all the larval food should go toward feeding the grafted cells and not be distributed among other larvæ. Do not expect to rear the best queens if the bees have to feed worker larvæ at the same time. Feeding will be necessary if nectar is not coming in freely, and the colony must be strong. If properly done, an average of 90 per cent or more of the grafted cells will be accepted and drawn out into the finest cells you ever saw. By grafting a new colony each week, one can always have dozens of young queens maturing and ready for use whenever needed.

E. S. Miller, Indiana.

A Plan for National and Regional Organizations

By W. E. Anderson, Louisiana

FOLLOWING my resolutions at the Southern Conference (published on page 165, April), I suggest the following for comment. The idea is that a truly national organization can be worked out that will not be top-heavy.

This plan is intended to carry through from a small unit to a practical organization in each successive step to a national association. That the plan is practical is shown by the efficiency with which the four regional plant quarantine boards and the national plant quarantine board are operating. It does not have to do with county or state associations, since beekeepers have already organized along this line.

Regional Organizations

The county and state organizations now in existence shall be grouped into four regional organizations (with possibly one in Canada), the regional organizations to be composed of the following states:

The eastern organization comprising the states of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, Pennsylvania, New Jersey, Maryland, Delaware, Virginia, and West Virginia.

The central organization comprising the states of Michigan, Ohio, Kentucky, Wisconsin, Illinois, Minnesota, Iowa, Missouri, Indiana, North Dakota, South Dakota, Nebraska, and Kansas.

The western organization comprising the states of Montana, Wyoming, Colorado, New Mexico, Idaho, Utah, Arizona, Nevada, Oregon, Washington, and California.

The southern organization comprising the states of North Carolina, South Carolina, Georgia, Florida, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas.

These regional organizations will hold annual meetings at desired places and the representation at these meetings will come from the membership of the county and state organizations within the given area.

National Organization

Each regional organization shall elect two individuals as their representatives to the national organization, which will thus be confined to a small group of outstanding members from all over the country. The national organization will meet annually, at the same time and place as one of the regional meetings (except for special meetings at central points), so that the members may take part in the regional meeting and convey items of interest from one region to another through their respective representatives at the national organization.

Thus, the national meeting will be held each year with a different regional organization meeting until the four regional meetings have been attended by the entire membership.

The place of the fifth annual meeting to be designated by the national organization as nearly centrally as possible, and the meetings of the regional organizations the fifth year to be scheduled with the national, thus giving a truly national meeting every fifth year.

Problems of Organization

Local problems naturally would be passed on at the various summer meetings of the county and state organizations. Should a local problem develop of regional importance, it can be handled at the following regional organization meeting. Should this problem be of national importance, the regional representatives to the national organization will take it up then. If it needs the cooperation of other regional or state associations, their representatives at the national can carry it back to their organization, together with the recommendation of the national organization.

National organization representatives will be able to acquaint the regional organization of problems in respective regions. The national organization can suggest policies and projects which will reach down to the state or county organizations, respectively. In addition, the national should have a program of its own for which the national would be alone responsible, such as advertising and encouraging the use of honey; anything of direct benefit to beekeepers throughout the country.

The national organization would have to be given substantial support and so would assess the regional organizations in proportion to the revenue derived from beekeepers in each region. The regional organization would get its money from the state and county organizations with the region in like proportion.

If such a plan is acceptable, definite steps should be instituted at the various county and state summer meetings for organizing a regional association, the first meeting of which may be held this year and representatives elected to the national. These representatives elected by the various regional organizations can meet at the same time and place the last regional organization holds its meeting, when they can organize into a national organization and begin to function.

This plan should succeed because it will not require the annual outlay of much money or loss of time in travel and distance to attend a national meeting each year. Yet beekeepers will receive the benefit of real thorough organization work and they will know what is happening everywhere through their regional representatives.

Fighting the Bugs

The great increase in insects and plant diseases offers a very real problem to every fruit grower or gardener. Every year brings some new pest to fight, and it is only by thorough methods that we are able to secure satisfactory crops.

"Spraying, Dusting and Fumigation of Plants" is the title of a book by A. Freeman Mason which covers this subject very completely. The book is so arranged as to help the gardener meet each problem as it arises, from the selection of a sprayer suited to his needs to the application of spray to each special crop.

The whole range of commonly cultivated garden crops is treated with specific instruction as to when to spray to control the insect pests or diseases of each, whether it be apples, melons or cotton.

This book will help you to recognize the particular pest with which you have to deal, will tell you what remedy to apply and when to do it. It is a book of reference for daily use during the growing season. Since insects and diseases reduce the yields of crops to enormous extent, application of the proper remedy at the right time will result in large savings to the grower. Accurate information thus is worth many times the cost of the book. It is a large volume of 539 pages and sells at $5. MacMillan Company of New York are the publishers, but the American Bee Journal will supply copies at the publishers' price.

Grafting Wax

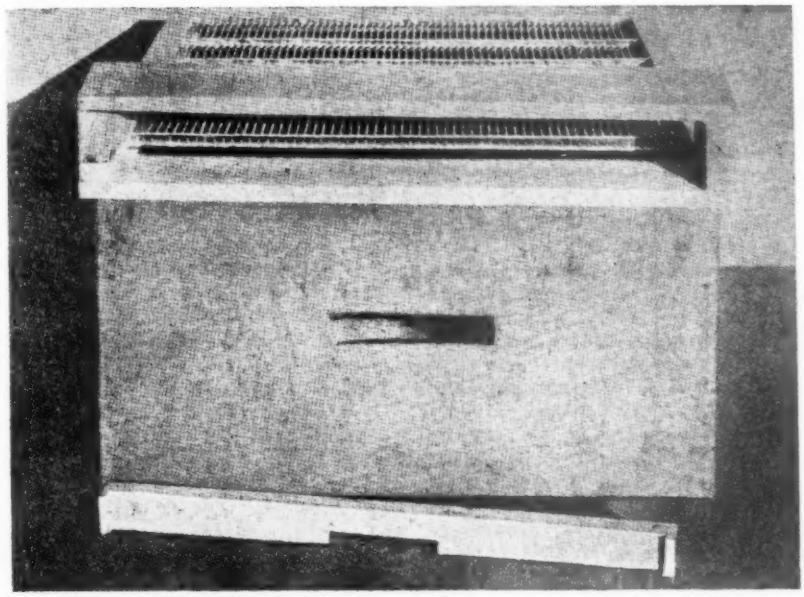
We have a request from a reader for a formula for grafting wax. Formerly a wax composed of resin, beeswax and tallow was very generally used in nursery work. The following is a typical mixture:

Resin, four pounds.
Beeswax, two pounds.
Tallow, one pound.

Other mixtures are made with linseed oil instead of tallow. To six pounds of resin is added two pounds of beeswax and one pint of linseed oil. This mixture is heated for use and applied hot with a brush.

The Middle Entrance Hive

By J. H. Sheppard



The middle entrance, Mr. Sheppard suggests, as an improvement over the top entrance. He shows the device above. The top entrance, described by Mr. Insinger in March, called such comments that we show plans for it on page 220 of this number. Compare the two for yourself.

It has been conclusively proved that if hives have an entrance above the brood chamber, instead of a bottom entrance, the bees come through the winter with but very few losses as compared with the latter. The chief reasons for this are that ventilation is more perfect and more under control by the bees. Dampness, resulting in wet and mouldy combs in winter, is avoided. Colonies in hives with bottom entrances frequently die in winter, especially in the colder districts, through dead bees accumulating and blocking up the entrance, thereby causing suffocation. This cannot very well happen with an upper entrance. With what is termed the middle entrance, which becomes a top entrance for winter after the supers are removed, the queen is confined to the brood chamber by an all-wire excluder, from which she and also the drones have free egress but are unable to enter the supers.

Directions for Using the Middle Entrance

The middle entrance device is placed immediately above the brood chamber, the honey supers being added as required. It is advisable to use a wooden inner cover. If this has an opening in the center for a Porter bee escape, it will serve the double purpose of a super-clearer and be convenient for feeding, as a feeder can be inverted over it. The inner covers are usually made of three-ply veneer with a strip three-fourths inch wide and one-half inch deep nailed all around the upper edges. For winter, the queen excluder is taken away to be replaced when the supers are put on in the spring. If the inner cover is inverted over the brood chamber for winter, this will provide extra space for the bees to cluster well above the frames. A shallow or deep hive body placed over the inverted inner cover will hold sufficient warm packing for winter protection. An ordinary entrance block can be used to regulate the size of the entrance.

Description and Measurements

The alighting board and sloping top of the middle entrance device, forming the porch, is three inches wide, so that it can be used inside a Kootenay case. The measurement from the front of the porch to the back of the hive, assuming that the hive body is 19¾ inches in length, is 22¾ inches. The inside measurements of the porch are 2¼ inches at the back, 2 inches in the front, and the width 15¼ inches bare. The sides of the middle entrance, which rest on the top of the brood chamber, are made wedge shape, sloping from front to back, the front being ¾ inch deep. This permits an ordinary all-wire queen excluder to rest above it. The entrance block is ¾ inch in thickness, 1¼ inches deep and 15 3/16 inches long. The opening in the center is 3 inches wide by 5/16 inch deep, and the end pieces are 5/16 inch square.

British Columbia.

A Message to Fathers on Mother's Day

Here is something for fathers to think about on Mother's Day: The deaths of mothers in childbirth in the United States is the highest in the civilized world. For every thousand live babies born, six mothers lose their lives. In the Netherlands, for example, this rate is only three, and in twenty other countries the rate is lower than in America.

This does not need to be the case. Adequate maternity care can prevent a large part of these tragedies. Here is the proof: Among 4,726 mothers cared for by the Maternity Center Association in New York City, the rate was reduced to 2.2 per thousand live births, while the rate for mothers living in the same district but not receiving special care was 6.2.

The records of these cases have been examined by no less an authority than Louis I. Dublin, statistician of the Metropolitan Life Insurance Company, who said: "This result is indicative of the saving of lives that might be accomplished were every mother to have the benefit of adequate maternity care."

In two ways fathers can help bring about improvement: First, by cooperating with health departments and nursing organizations in creating local machinery to effect the fine cooperation between physician and nurse which played a large part in the results attained by the Maternity Center Association; second, by assuring their own wives adequate care from the first moment a baby is expected. Women too often put off seeing a doctor and making the necessary arrangements. It helps a lot for the husband to see that this is done.

A few other suggestions to fathers on Mother's Day:

1. Get the best doctor available—"nothing is so expensive as poor medical advice."

2. Follow the doctor's instructions to the letter. Nothing that bothers your wife is too trivial to ask the doctor about. Talk things over with the doctor yourself and he will tell you everything you should know.

3. Encourage your wife to live simply, get eight hours' sleep and some sunshine, some exercise, some fun, and avoid fatigue. She should eat a balanced diet every day and drink plenty of water.

4. Make the best possible arrangements for confinement.

5. Make plans for the baby's care before it arrives, so things will run smoothly from the very beginning.

6. Plan ways to make work easy for your wife until the baby is six weeks old.

(Continued on page 234)

Of Three Races, I Find Italians Superior

By R. O. Dodge

I read with interest the articles by Mr. Latham and Mr. Hann on "The Best Race of Bees." I have been in the bee business 18 years and yet I am in no position to state which is the best race, for I have only tried three. Of the three, one is so superior that there is no comparison.

I started with common black bees obtained by cutting bee trees. Most of them were cross and unpleasant to work with. They were very prolific and made beautiful comb honey but their other qualities were undesirable.

I kept them for several years. Finally a beeman about two miles away got some Italians and that spring one of my queens mated with a yellow drone. The bees were so pretty I decided to try them. In the fall I bought a queen and put her with a colony I had just obtained from a bee tree. They did not make enough honey to last through the winter, and the queen died in January. I united them with another colony and on June 15 there were still quite a number of yellow bees, so I found they were not short lived.

The next year I bought a queen from Ben Davis. The bees were beautiful, gentle and produced so much more honey than the blacks that I requeened with Italians. The best that the blacks had done was a little over 200 sections of comb honey from one colony. But the first year one of my Italian colonies produced 600 pounds of extracted honey before the middle of June.

I read so many articles about Caucasians being the gentlest bees in the world and the best honey gatherers that I sent to several breeders for queens. After giving them a trial I have found them to be superior to Italians in gathering propolis, swarming, stinging, and having an absence of honey in the hive.

In the season of 1930 my Italians averaged 100 pounds to the colony, the Caucasians nothing. One of the Caucasian queens was from the stock that produced 803 sections of comb honey. If she was a fair sample I wonder what my Italians would do in the same location.

Caucasians may have the longest tongues but what good is a long tongue if they do not gather honey? I found them to be inferior to Italians and even to blacks in every way that is good with one exception. They do work on cold days a little more than Italians. Early in the spring they seem to be stronger than the Italians but by the first of May the Italians have left them far behind.

Mr. Latham said it was easy to keep them from swarming, but I had just the opposite experience. Each colony seemed to be trying to out-do the others. They would even swarm when there was no queen to come out with them. From my observations I would say they do not live as long as Italians.

When it come to being gentle, I do not think it is possible to have bees more gentle than my Italians. I do not wear a veil or use smoke and I have yet to be stung by one. I have found goldens to be more gentle than three bands but there are exceptions and I have one now, for one of my gentlest colonies is three banded.

I have heard of bees being yellow to the tip but I never saw any until last fall. I bought a queen from a strain that was said to be very yellow. Her bees are surely yellow, do not even have bands. The only place not yellow is the very tip end. The color is not the only good quality for they are very gentle and produced over twice as much honey as bees from other queens introduced at the same time. If they are as good as they seem to be I will requeen with this strain this fall.

I would like to try the Cyprian bees but there are no pure ones in this country and I cannot import any A breeder on the Island of Cyprus tells me that his bees are very gentle and he does not wear a veil or use smoke. They may gather more honey than Italians.

My bees have been working every day since the middle of January and I do not think any other race of bees could do much better. I do not agree with Mr. Hann that one should make at least three importations of queens. One importation of 25 queens should be enough to give any race of bees a fair trial. Just one was all I needed to prove that the Italians are far superior.

Oregon.

"The Metabolism of the Honeybee Colony During Winter"

This is the title of Bulletin No. 175 from the experiment station at Laramie, Wyoming, and gives the results of experiments by Prof. C. L. Corkins of the University of Wyoming on the winter behavior and winter activities of the honeybee colony. It would be too long here to go into detail of the results which are given in the fifty-four pages of this bulletin with chart and figures. Copies may be obtained by application to the Director of the Experiment Station, Laramie, Wyoming, for Bulletin No. 175, by C. L. Corkins.

We hope later to have a more extended and easily understandable account of this work. To summarize here briefly, however, it was concluded from the study that:

1. Daily loss in weight of colonies is less during cold periods than during warm periods.
2. The temperatures of the clusters in the so-called heat-producing region remain remarkably constant regardless of outside weather.
3. By the contraction of the cluster during cold, the bees are able to conserve their heat down to certain limits.

It may be concluded practically, therefore, that bees do not die in winter from cold, but that they starve to death because of their inability to move the cluster during severe cold periods; that, except in long protracted periods of extreme cold, bees winter with less damage without extreme protection when the temperatures are low.

Finances of the American Honey Institute

THE work of the American Honey Institute is wholly that of finding new outlets for honey and of bringing the attention of consumers all over the world to the value of honey as a food. Important contacts such as that made with the General Mills, Inc., who became so much interested that they devoted one entire broadcasting period over the National network to honey alone, is of inestimable value to beekeepers everywhere. Whether the beekeeper lives in California, Maine, Florida or Minnesota, publicity of this kind helps to sell his honey. Even though his honey has a ready market in his own locality, the Institute program helps to move honey that might otherwise come in direct competition and depress his market.

Beekeepers are the first in line to derive benefit from the work of the American Honey Institute. The benefit that is derived by manufacturers of bee supplies, honey bottlers and jobbers, tin can and glass manufacturers, and other allied trades, is secondary to that of the beekeeper.

It is necessary, therefore, that the rank and file of beekeepers support the American Honey Institute if it is to live and continue its wonderful work of popularizing honey.

In order that subscribers to the Institute may know just what is being done with the funds paid in, Treasurer R. H. Kelty has submitted his financial report.

Fiscal Year 1930-31

Balance on hand June 1, 1930	$ 952.18
Contributions from manufacturers and dealers, June 1, 1930-March 31, 1931	4,397.50
Contributions from beekeepers and beekeepers' organizations, June 1, 1930-March 31, 1931	1,880.51

Sale of printed material	312.75
Sale of contributor's seals	24.50
Miscellaneous receipts	133.17
Total	$7,700.61

Expenditures:

Salaries—Dr. Barnard, Miss Fischer, Miss Taylor	$5,595.00
Office rental, telephone, lights, etc.	1,332.00
Miscellaneous office expense	370.00
Publishing news notes	161.22
Stationery and engraving seals	298.43
Travel expense	473.74
Miscellaneous expense—postage, telegrams, express, extra stenographic hire, kitchen expense	461.88
Bad check returned	5.00
Total	$8,697.27
Deficit	996.66

It will be seen that the salaries paid are very moderate.

The failure of one or two of the larger subscribers to come through with their support in 1930-31 as in previous years has been a severe handicap to the Institute. It will be noted that a deficit exists on March 31, 1931. Beekeepers should come to the rescue.

We are getting our money's worth as never before; it is an unusual opportunity. Dr. Barnard travels from one end of the United States to the other on business for other concerns and on work for which he is doing for the Child Welfare Committe under President Hoover. In these trips he is able to accomplish much for the American Honey Institute. The beekeeping fraternity, therefore, has a big advantage due to these many contacts that Dr. Barnard is able to make at very little cost to the Institute.

The work of the Institute is so important and covers such a wide range for the industry that it is unthinkable that any of the work planned should be allowed to lapse even for a short time.

Hard times have been the share of the industry during the past three years. Certainly the immediate future ahead must be brighter and can certainly be improved if everyone puts his shoulder to the wheel to keep our American Honey Institute functioning at top speed.

Reduce, the Honey Way

By Dr. H. E. Barnard

"THERE goes the dinner bell" is the happiest note of the day for everyone in the family except the fat ones who know they eat too much, and perhaps the teen ones who have Hollywood notions of slender figures. Long may it ring, for dinner-table dangers are not in the joys of eating, but in unwise choosing.

Foods that pile up fat instead of muscle are not recommended by life insurance companies or family doctors. They suggest, rather, a wise choosing of the things one likes and their use in moderation; for folks who are overweight, or easily given to putting ten pounds of fat where two should grow, they advise bulky foods like fruits and vegetables that, while low in calories, are rich in minerals and vitamins.

There are many reasons why a person may be fat, or overweight; and many important things to be considered before one decides he is "overweight" and begins at once to follow some of the foolish and very dangerous "reducing diets" which are really starvation diets. The Hollywood diet craze of last year undoubtedly reduced the weight of thousands who foolishly followed its regimen through eighteen torturing days. And it wrecked the health of many obese but perfectly well persons.

The first step in deciding to reduce your weight is to have your family doctor decide whether your excess weight is ten pounds or one hundred pounds, or just normal for you.

For the average individual who finds himself ten to thirty pounds overweight, the real cause for this excess baggage is simple—too much food; too much food heavy with calories and too little of the foods which are rich in vitamins, minerals and natural sugars, all tied up in a compact bulk so that they fill our stomach and, therefore, satisfy our appetite.

And so one sure, healthful and safe way to reduce is to seek out these splendid nature-built foods which meet the body's requirements of lime, iron, bulk and a proper amount of calories.

In every reducing diet the calories are the important things. Even fat persons should know that unless they eat a sufficient amount of energy foods they will lower their resistance to disease and become so miserable and low spirited and bad tempered that their reducing diet visits a veritable curse on the rest of the family.

Low calories is usually thought to mean no sugar and no starches and a sort of lettuce and pickles existence. This isn't so at all. Low calories doesn't mean "no calories"; it means only less sugar and starches. Of course, our sweet tooth is a normal and natural craving for foods of high energy values, and those who are overweight are usually so fond of sugars that their abstinence from them is far from easy.

There is a sane, sound, practical way by which to satisfy one's sweet tooth with less calories than are present in the usual spoonful of sugar. That way is the **honey way.** Food writers usually class sugars, syrups and honey in the same list of sweets to be avoided in reducing diets. They do so without giving enough attention to the scientific fact that honey is a very different sweet from sugar. In the first place its caloric value is 20 per cent less than that of sugar, for honey is a solution of several sugars in water. Then because it is usually at least 50 per cent levulos, which is absorbed into the blood as soon as it reaches the stomach, the sweet tooth is satisfied at once, instead of some time after the contents of the candy box have all been eaten, for sugar in the usual form isn't ready for digestion until it has been acted on by the gastric juice of the stomach and the enzymes which are so actively at work in the intestinal tract, and all the time this fitting of the sugar for assimilation is going on greedy fingers reach for more candy or pour additional spoonfuls of sugar into the coffee cup. With honey, however, the demand for energy food is met as soon as it reaches the stomach, and one helping of reasonable amount is all that is called for.

Still another reason for the quick satisfaction honey gives is it is sweetness plus flavor, whereas sugar is just sweetness. Sugars are very different in their sweetening power. Milk sugar has almost no sweet taste; cane or beet sugars are sweet, but fruit sugars and the levulose of honey are intensely sweet. And added to the high sweetening power of honey is its pungent, aromatic aroma, the fragrance of flowers sealed into the cells of the honeycomb. **These qualities, so completely lacking in most other sugars, help greatly to stimulate the taste buds** and to urge them to signal "enough" after a really small calory portion has been eaten.

And that is why honey can be used in place of sugar to furnish the necessary energy food in reducing diets and by those who should have less poundage for weakened hearts to carry while at the same time it sweetens the disposition of the seekers for girlish figures.

Then and Now

The other day I came across a catalog of beekeepers' supplies from which I ordered in 1900. The shallow Danzenbaker hive, never heard of now, and even then not adopted by many practical apiarists, was featured. Note these prices: Ten-frame dove-tailed hive (body, bottom board,

frames and cover, complete) in the flat, 70 cents each in lots of ten. Sections, $3.00 per thousand. Thin super foundation, 50 cents a pound in 25-pound lots, 55 cents for a single pound. But fancy comb honey then sold for 10 cents a section; at least I sold hundreds of pounds of it direct to the consumer at that price and felt I was getting its full value. I remember once making a freight shipment to a Chicago house and getting 12½ cents, the top of the market. In those days a man working by the day on a farm in harvest time considered himself well paid at $1.25.

S. F. Haxton, Pennsylvania.

Imported Italian Queens Are Ace High With Me

By V. R. Thagard

I HAVE read with interest the articles by Latham, Hann and others on the best races of bees. It reminds one of the good old times.

I too have tried practically every strain of Italians of any note, along with several other races of bees. For a long time I tried to find a yellow strain of Italians that was gentle and good honey gatherers. The ones I tried, if they were gentle, were poor honey gatherers; if they were good honey gatherers, they would sting like yellow-jackets. And if they happen to be both gentle and good honey gatherers, they breed out of season, when there is no prospect of a honeyflow, as if a big flow was always ahead.

I may be partial to the dark imported Italians, for some of my first queens came from Italy, and ever since I have used them more or less. I want to say I have never seen any strain or race of bees that had all the good qualities of these bees.

They were very gentle, as gentle as any Caucasian. They seem to time the honeyflows and would always reach their peak just as the flow would begin. As soon as the flow was about over they would begin to cut down on their brood rearing, while the bright strains would keep it up. The bright Italians would be boiling over with bees consuming their surplus because there was no honey coming in, and the imported Italians would be conserving their stores.

Down here, where we have several flows in a season, the bright Italians would consume their surplus and would be getting weak by the time the next flow started, and the imported Italians would be building up to reach their peak at the beginning of the next flow; at this time they would be carrying a two-story, ten-frame brood nest and boiling over with bees. For us, they always stored a great deal more honey.

A poor year the queen seems to know how to lay accordingly and keep just enough brood and bees in the hive to keep going. Somewhow they always manage to feather their brood nest for winter regardless of the year. The average fall they chuck the brood nest full, and by the end of the season the queen has less than a full frame to lay in. I have been keeping these bees since 1918, and I have never fed a colony to keep them from starving, and this I cannot say for the other strains.

The imported queens' daughters range from yellow to black in color, and if they happen to get mismated one could never convince the customer that the queen was bred from pure stock, and the bees are dark three-banded Italians. Owing to the fact that these Italians are so dark, few breeders offer them.

Alabama.

A Message to Fathers

(Continued from page 231)

7. Always remember to be as helpful as you can, because sometimes the days are rather trying and your wife needs the comfort and understanding help that you alone can give. You were never more needed than you are these days.

Many state and local health departments distribute pamphlets on maternity care. Such material can also be secured by writing the Children's Bureau, Washington, D. C., or the Maternity Center Association, 576 Madison Avenue, New York City.

American Honey Institute

(Continued from page 224)

Indiana, four; Missouri, one; Florida, one; Ohio, two; New York, one; Illinois, one. An audience of seventy-five interested women was the minimum number guaranteed if the Institute could but send a demonstrator, but regardless of whether or not the guarantee had been seven hundred and fifty or seventy-five, the Institute was forced to refuse. This is an unfortunate situation.

International Athletes Tournament in Los Angeles, 1932

A Mr. William Craig, 1543 Cottman Street, Philadelphia, Pa., writes the Institute as follows:

"I would be pleased to get honey recipes. Can you advise me of a party in California who puts out orange blossom honey? Nineteen thirty-two will see athletes from all over the world at Los Angeles for the world championships — rowing, tennis, hockey, track and field sports.

"As I use honey instead of sugar in all my training of athletes, if you could advise some of your sponsors of your Institute about me and of my sketches, 'Kom-Mon Sense and Non-Sense,' in which I give a household hint to mothers, a true story for a child in which I can make a true bee story continued each day, and why I use honey for athletes and also in sickness, I will appreciate it."

Any of our members interested in learning more of Mr. Craig's service should get in direct touch with him.

Honey in the Magazines

The Institute has not had time to check over many of the national magazines this month to see how many honey recipes are included, but did note three in material sent out by the Kellogg Company and one for honey raisin and nut sandwiches, page 28, "Household Magazine" for April—"Dried Fruit Delicacies," by Zorada Z. Titus.

Local Radio Talks

Any number of persons are giving honey talks over local radio stations. The Institute has sent special honey copy to five persons this past month who were planning honey talks over their local broadcasting station. These requests were from Wisconsin, Illinois, Iowa, Montana, and Nebraska.

Ohio State Restaurant Association Wants Honey Demonstration

Four letters have come to Dr. Barnard from Secretary Frankenburg of the Ohio Restaurant Association, stating that he wishes a honey demonstration as a feature of the program he is planning for their association meeting May 19, 20 and 21. It looks very doubtful whether or not the Institute can take care of this request.

Honey Pie!

Pie history tells us that their origin is ancient, but the fruit or sweet pie as made in this country is a typical American dish. The type of pie sold on the streets of old London more than a hundred year ago was usually meat pie and differed in no material way from our meat pies of today. The crust, always on top, was made of biscuit dough rather than of pie crust we use for our fruit pies.

Soon you'll be on the golf links (in some sections you already are), or you'll be starting the garden, or you're driving to the country to see the orchards bloom, wild flowers on the hillside—natural beauty not to be bought at any price. How good one feels after a day in the open country; and part of that "good" condition is the keen appetite one develops. Food, food, food—that's the first thought after such a day, and tucked away in your thoughts is the hope that the dessert will be pie.

Pies have never lacked in popularity, and made the honey way are real foods. Honey pies are of good flavor, nourishing, and are good hot or cold.

Here's a variety of honey pies fresh from American Honey Institute's home kitchen:

Honey Pecan Pie—Three-fourths cup honey to one cup (depending on richness and sweetness desired), three eggs, one-fourth teaspoon salt, one cupful broken pecans. Beat eggs slightly. Add honey, pecans and salt. Mix well, put into partly baked pie shell and bake in a moderate oven (325° F.) forty minutes.

Honey Pecan Tarts—One-half cup honey, two tablespoons butter, one-eighth teaspoon salt, three-fourths cup milk, two eggs lightly beaten, two and one-half tablespoons flour, half cup whole pecans, one teaspoon vanilla (optional), half cup cream whipped. Scald milk, blend eggs, flour, salt and honey. Pour scalded milk over this mixture. Set aside to cool. Add flour and salt to lightly beaten eggs. Add the milk and mix well. Return to double boiler and cook until thick and smooth, stirring constantly. To this add butter. Remove from fire, add vanilla and cool. Put two tablespoons of mixture in each tart shell and place four pecan meats on top. Put a teaspoon of whipped cream in the center of each tart and lightly drizzle with honey. This recipe makes eight tarts. The same filling, omitting the pecans, may be used for banana cream, cocoanut cream, or date cream pie.

Honey Raisin Crumb Pie—One egg yolk, three-fourths cup honey, one-fourth cup hot water, three-fourths cup bread (stale rolls or cake) crumbs, one-fourth cup flour, one teaspoon cinnamon, one-eighth teaspoon ginger, one-fourth teaspoon nutmeg, two tablespoons butter, half cup raisins, half cup nut meats. Blend hot water and honey, add egg yolk. Mix flour, crumbs, and spices together. Rub in butter. Place layer of raisins on unbaked pie shell, then nut meats, pour over honey water egg mixture and top with layer of crumb mixture. Bake at 450 degrees F. or hot oven until crust browns at edges, then reduce to 325 degrees for twenty minutes or until firm. Serve with whipped cream or toasted honey meringue.

Honey Meringue—Place one-fourth or one-third cup honey in bowl with one egg white and double Dover egg beater or Ladd improved ball-bearing type, beat together until mixture peaks. Spread over pie and toast as usually done. When the electrical beater is used (Kitchen Aid was used in Institute kitchen), one-half cup of honey may be used with one egg white, beating together on speed two for ten minutes. A most delightful topping results.

Honey Apple Pie—Make an apple pie as usual, but **do not use any sugar with the apples**—just the butter and cinnamon, and do not use a top crust. After it is baked, drizzle three-fourths cup honey over the apple filling and sprinkle one-half cup pecan pieces and let pie stand until

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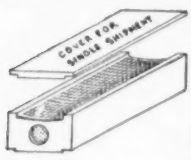

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apples become soft and absorb all the honey. Then serve.

Honey Icebox Strawberry Pie—Mash fresh strawberries and measure one pint of them after crushed. Add half cup of honey, one-eighth teaspoon salt and one-eighth cup water. Simmer gently for twelve minutes. Remove from fire and add one tablespoon gelatin which has been soaked in two tablespoons cold water for five minutes. Cool the mixture in refrigerator until it sets, then pour into baked pastry shell or individual tartlets and return to refrigerator. When firm, top with whipped cream lightly drizzled with honey. An unusual strawberry pie may be made by covering baked pastry shell with a half-inch layer of the cream filling used in the honey pecan tarts and then covering this mixture with the strawberry filling.

Honey Apricot Meringue Pie

One cup drained stewed apricots thoroughly mashed and honey sweetened*, two egg whites well beaten, three tablespoons honey, two tablespoons lemon juice. Mix mashed apricots and egg whites. Mix lemon juice and honey and add to apricot and egg white mixture. Pour this mixture in pie tin properly lined with pie crust which has been slightly browned. Top with honey meringue and toast.

*Honeyed Apricot Sauce — Wash three cups dried apricots and soak over night. In the morning cook in enough water to cover until tender. Remove from fire and add one and a half cups honey in which has been mixed one-half teaspoonful cinnamon and two teaspoonfuls of lemon juice. Allow to stand at least twelve hours before serving.

THE EDITOR'S ANSWERS

When stamp is enclosed, the editor will answer questions by mail. Since we have far more questions than we can print in the space available, several months sometimes elapse before answers appear.

USING PACKAGE BEES TO STRENGTHEN WEAK COLONIES

I propose buying a lot of package bees without queens for strengthening colonies. What is the best method of uniting these packages with the colony to be strengthened? How would it work, and would there be danger of them balling the queen to spray both with sugar syrup and dump the package in? VIRGINIA.

Answer—There is usually no difficulty in inserting queenless bees into colonies of queenright bees. But they must be well fed and must not have any robber bees around. Doing as you propose, spraying them with sugar syrup at the time of uniting them is a safe method.

If any of them should be cross bees, it might be advisable to cage the queen for twenty-four hours or so, but this is not probable.

RECURRENCE OF FOULBROOD

I have seven colonies of bees which I am keeping for my own honey and as a side business. I have been studying bees for several years, but last year I had my first experience with foulbrood.

Last year I discovered one of my best colonies affected with American foulbrood. I told a neighbor beekeeper about it. He suggested I shake them into an empty hive and destroy the brood, which I did. I left them in this hive thirty-six hours. At the end of this time I shook them into another hive with full sheets of wired foundation and fed them with granulated sugar syrup, two parts sugar, one part water; this was done the latter part of August. The queen started laying and produced a fine bunch of young bees for winter. I ordered a young queen and requeened this colony about the middle of October. At that time I could not find a sign of foulbrood.

This year this is the strongest colony I have, but they have foulbrood again. Was there any fault on my part, or did they get affected from some other source?

I have another operation which I was going to try and would like to have your opinion on it. I gave the colony next to the one that is affected two hive bodies. I intended to let them fill this extra hive body with honey, which they have already done. Late this fall, after the laying season and honey season is over, I intend to shake the affected colony into an empty hive and leave for about forty-eight hours, then shake them into this hive which was filled with honey by the colony next to the one affected. Will this operation be successful? What do you think about it?

Any information you can give me in regard to the destroying of this foulbrood will be appreciated. WEST VIRGINIA.

Answer—If you have but one colony diseased, it might pay you to do as they recommend in California — burn it up, bees, honey, hive and all. But if you wish to save it, you must remember that the first man who recommended treating diseased colonies, Schirach, called attention to the necessity of starving the bees before giving them additional combs. The reason of this is that the germs of foulbrood exist in the honey, and the honey must be all consumed before the bees are given some means of rebuilding their combs. It is also necessary to singe with a blow torch all the parts of the hive which have come in contact with the bees. If the whole thing is carefully done, this will put a stop to the disease. But one must be careful that none of the bees desert the swarm to go to the neighboring colonies and bring the disease to them. The great care needed to prevent a spread of the disease is evidently the reason why so many beekeepers prefer to destroy the diseased colony.

However, there is always a possibility of the disease being reinstated through whatever cause brought it on in the first place.

The other operation you mention might succeed.

TRANSFERRING FROM A HOUSE

Several of my neighbors have bees in their houses, which have become a nuisance. I would like to move them into hives by using a bee escape. As I work on a farm, I will not have time to give these hives regular attention during the transfer.

Dandelions furnish supplies till about the third week of May. The clover does not start till about the second week of June. There is not much coming in between.

1. Since it is apt to turn cold in May, should I wait until the clover starts before placing the queen in the empty hive body on full sheets of foundation?

2. Could the queen be introduced to a nucleus, and this placed near the bee escape?

3. How long should be queen be caged in the first case?

4. Would it be necessary to cage her in the second case, and if so, how long?

5. If I should happen to have to keep queens on hand for several days or a week, could they be placed over brood frames in a colony with the candy covered with tin?

MINNESOTA.

Answer—1. We have never seen much luck from forcing bees out of a wall by the use of a bee escape. The reason is that only the old bees come out and it is difficult to build up a colony out of those bees, unless we can give them brood, as well as a queen.

If you could get the queen out of the cluster within the wall, then you could also get the combs of brood and fasten them within the hive, in frames.

If you must supply them with a queen purchased from elsewhere, you should get some brood from some other hive to draw them. However, if the colony is exceedingly strong, you may be able to treat those bees as if they were a swarm. In that case it is best to not move them until near swarming time. Then you may get enough bees by the use of the excluder to start brood rearing and establish the colony, even with a strange queen.

2. If you start with a nucleus and some brood, you may be able to start at the beginning of the honeyflow, say about the early part of the clover harvest.

3. The queen does not need to be caged long, since the bees will find themselves in strange surroundings. Cage her, say, twenty-four hours.

4. The same would apply to a nucleus, though if it is strong it might be best to cage the queen forty-eight hours.

5. Queens may be kept, caged, in a queenless or queenright colony, as the bees usually feed them willingly.

If I had this transferring to do, I would open the space where the bees are, in the house wall, by removing siding and would then transfer all the combs and all the bees. It may look like a di...cult job, but much depends upon what shape the colony is in. When you transfer everything, combs, brood, queen and bees, you find yourself with a good colony right away.

FEEDING BACK HONEY

1. I have some old section comb honey somewhat granulated. What is the best way to feed this for spring stimulation?

2. I have over a half barrel of nice extracted honey from last year. It is granulated solid in the tank and can be cut out in slices like butter. What is the best way to feed it back? Is it better to dilute it? If so, what portion of water?

3. Why are we required to shave bait sections down to one-fourth-inch cells?

WEST VIRGINIA.

Answer—1. Put the sections in the super, on top of the hive you wish to feed, leaving an opening from the hive to the super for them to come through. If any of the honey remains granulated, sprinkle a little water on it from time to time. The bees will use it.

2. Granulated honey had better be melted to feed the bees in spring. You need not put any water in it unless it is very thick. You might feed it as it is, but the bees will do better with it if liquid. Put it in feeders, of course.

3. There is no need to shave bait sections, except perhaps to prevent the queen from laying eggs in them while they are empty. Otherwise they will do very well as they are.

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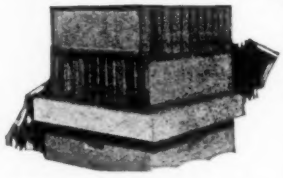

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American Bee Journal - : - Hamilton, Illinois

TRANSFERRING FROM SMALL TO LARGE HIVES

I have two colonies of bees, one in a Modified Dadant hive and the other in an old-style hive. I desire to know the best method of transferring the colony from the old-style hive to a new modified hive that will only have in it comb foundation. The old-style hive has frames in it, but they never had comb foundation and the brood combs run in every direction. The colony last fall was very strong and by its weight it must have had quite a large amount of honey. In its super it only produced about thirty-six pounds.

Anything you can tell me relating to when it is best to make the transfer, and how it is best to do it, will be greatly appreciated.

PENNSYLVANIA.

Answer—The best time to transfer bees from old-style hives to movable frames is just at the beginning of fruit bloom, as the bees have less honey and less brood than at any other time.

Smoke the bees, then drum them, with an empty box right over their combs. If you do that on a warm day, the bees will go right up into the empty box. Then place the new hive on the stand occupied by them and shake them in front of it. They will go right into the hive unless the queen is not with them. In that case you would have to drum them again.

The combs containing brood should be cut out and transferred into frames and given to the colony.

We have a leaflet on transferring bees which we sell for 10 cents, and it is worth while to get it, as it gives a number of suggestions that are useful.

BEEMOTH IN THE HIVE

1. I would like to have some advice on the beemoth. I have a hive that is bothered with this pest. I fumigated with carbon bisulphide, using four ounces to a ten-frame hive, and fifteen hours later the moths were not dead. What can I do to kill them? Will this injure the bees if bees are in the hive?

2. Is it a safe thing to do to put a bee trap on the hive to prevent swarming?

IOWA.

Answer—1. Beemoths do not invade healthy colonies of bees when they have a good queen and plenty of bees. It is not advisable to use any poisonous substance to kill the moths, as this may injure the bees, and especially their brood. The only thing required, if your colony has a queen and plenty of bees, is to reduce the number f combs to the space the bees can cover. But I judge the colony in question may be queenless, for usually, at this time of the year, the moths are not numerous enough to annoy a good colony.

2. A queen-and-drone trap on a hive will prevent swarming, but it is so much in the way of the bees that we do not use any such device.

THE BEEKEEPER'S RETURNS FROM THE ORCHARD

We have but a few orchard trees close here, but a neighbor two or three miles away has a very large apple and pear orchard and only a few bees. Will it pay me to haul my bees to his orchard and leave them until after the bloom and then bring them back again? Dandelions and willows are very plentiful here, also quite a lot of black locust trees, but almost no fruit at all.

MISSOURI.

Answer—I do not believe that it would pay you to haul the bees both ways for the fruit bloom honey crop. But as it would pay your neighbor to have the bees there, he might be willing to pay half of the expense.

I am sending you a pamphlet which will show you how much good the bees are to fruit trees. Your neighbor should be as much interested as you might be in getting the bees there for the time of fruit bloom.

Taking Out Bee Insurance for Washington Fruit Crops

(Continued from page 227)

natchee Valley in his own trucks. The first two years he used the railroad. He says that aside from the financial advantages, which are doubtful, placing the bees in orchards gives him the advantage of building up his colonies. But, in the five years he has been doing this, he has had only one surplus crop.

Mr. V. V. Dexter, an apiarist of Ellensburg, submits the following suggestions:

A yard of one or two hundred hives at the edge of an alfalfa field would starve if they all started to work at the edge of the field, but there will be no more bees on the alfalfa near the yard than there will be a mile or two away. Unless there are **plenty** of bees in the orchards, there will be very little pollenation.

Each hive will scatter its force over a territory a mile or more across if there is bloom, irrespective of whether there are any other bees around or not.

If the bloom isn't much worked, a worker can fill up on a few blossoms and probably on the next trip come back to the same tree, and each bee makes few trips per day. The result will be almost no pollenation. But if the bloom is worked hard, then the field bee must visit hundreds of blossoms on many trees before it gets a load. Result, good pollenation.

Now as to my plan. The perfect plan would be pollenation districts with small charge on all fruit growers. But suppose that is impossible. The next best, I think, is for the bee men to make a sliding charge, so the orchardist can afford enough bees to do some good."

Mr. Dexter's remarks seem quite logical in viewing the general habits of bees at blooming time.

The number of bees required for proper cross pollenation will undoubtedly vary with the abundance of pollenizing varieties and the kind of weather at blooming time.

A large number of painters with brushes ready for work but little paint to work with could cover less surface than a smaller number with more paint.

A job of work which requires one hundred hours to perform could be done by one hundred men working one hour each, or ten men working ten hours each.

When the weather at blooming time is cold, cloudy, or windy, and the bees can only work a short time, it is obvious that more bees will be required to do the same job.

Last year Mr. Dexter tried out a very interesting experiment in the Yakima Valley. He bought two hundred packages of bees and divided them up in two hundred colonies. One hundred colonies were located adjacent to an orchard district; the others were located over a mile from any orchard. On examination after blossom season those further away from the orchards had built up the colony with comb nectar equally as much as those close to the orchard, indicating that if necessary bees will go some distance for their supplies.

No plan has been devised by which all orchardists would share equally in the cost of renting bees. Undoubtedly many of them get benefits of expenditures from those who do rent bees during the blooming season.

There is no certainty that bees will work on the particular orchard for which they are rented. We have made extensive observations in the orchards during the time that bees have been located therein and have sometimes been somewhat embarrassed to find bees neglecting the orchards where they are supposed to work and operating on more distant orchards which do not contribute to the cost. Sometimes the greasewood comes into bloom the same time as the fruit trees, and they have been known to desert the orchard in favor of the greasewood. However, these occasions are the exception and not the rule. In most instances bees have done good work.

We have followed the practice of trying to introduce bees into the orchard just at the time when the bloom is opening up on those varieties where they are wanted to work, and we are still inclined to think that this is a very profitable practice.

There is no advantage apparent in scattering bees through an orchard, but this has been done a great deal in order to satisfy the demands of the individual orchardist perhaps who does not understand the tendency of bees to cover a wide area.

The county agent has been the train dispatcher in the bee business at blooming time. A majority of the orchardists wanting bees have left their orders at the office and an effort has been made to facilitate distribution by assigning orders in the same neighborhood to the same beekeeper.

As time passed, each orchardist has developed a special preference for certain beekeepers' services. The result will probably soon reach the milk man stage of delivery, where three or four concerns chase each other around the same block to deliver a quart of milk here and there. In legitimate competitive business we are unable to develop the racketeer's distribution methods of allocation of blocks to avoid duplication.

In the beginning, the orchardist has not always appreciated the homing habits of the bees. Sometimes he moved colonies a few yards from some special tree to another. The result, of course, has been a loss of the bees which didn't get relocated. This matter has been largely cleared away by careful explanations and instructions.

Sometimes beekeepers have been careless in bringing in diseased bees and others have sometimes been infected. This has been due largely to neglected bees and a careless owner. The commercial apiarist has been very consistent in complying with the state law in regard to transporting diseased bees. We are insisting on being served only by those people who take bee inspection. This is, of course, only a matter of indirect concern to the orchardist, but very vital to the beekeeper if he doesn't want to wake up with a bad headache.

Six years ago, when the present county agent came to the county, there were many blocks of orchards where the hum of busy bees in the blossoms was seldom heard. Now at blooming time the area over most of our orchards sounds like the subdued hum of thousands of miniature aeroplane motors—the bees are gathering nectar and pollen from millions of blossoms.

Last year north central Washington produced nearly 24,000 cars of apples, representing about 24,000,000 apples. This was the largest crop of our history, and almost two-thirds of it represents self-sterile varieties which need cross pollination. Figure out for yourself how many million miles by air the bees must have traveled to do the job.

"Apiary"—or "Bee Farm"

As. Dr. E. F. Phillips has mentioned in Gleanings that when some technical words get in our bee journals most of us resent them. Now the word "apiary" means in common language "bee farm." We're beekeepers and we know it, but how many people that are not beekeepers know it? There is a story which you probably have heard about a family traveling south by auto and happening to see so and so apiary. The man says, "Gee, I never knew they had monkey farms as far north as this." This may sound foolish to us, but it is a true story. When the average person sees the word apiary he naturally thinks of apes.

Now we beekeepers, in order to keep ahead of the competition, must appeal to the people. I have in mind a large dairy. Now most farmers that have cows on their farm are inclined to call it a dairy. This dairy goes under the name of "Deerfoot Farms" and has made a good success. Why wouldn't it be a good idea to call our apiaries bee farms?

Lewis Konces, Mass.

E. E. Mott's Northern Bred Italian Queens
Non-Swarming

See free list with testimonies. Cannot tell it here. Select untested, guaranteed purely mated or a free queen. Why buy hybrids? April-May, $1.10; six, $5.75. June 1, $1.00; six, $5.50; twelve, $11.00; fifty, $42.50. Select tested, $2.00. Virgins, 50c; 12, $5.00. Safe delivery and satisfaction guaranteed.

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Combless packages of quality—on the dates you want them. Young, pure three-banded Italians, bred for gentleness and honey producing ability.

With queen	2 lbs.	3 lbs.
1 to 5 pkgs.	$2.75 each	$3.50 ea.
6 to 15 pkgs.	2.50 each	3.25 ea.
16 to 50 pkgs.	2.30 each	3.15 ea.
100 pkgs.	2.25 each	3.00 ea.

For larger packages, add 75c a pound. Queenless packages 75c each less. Shipping season starts April 5. Satisfaction guaranteed.

Select young laying queens, 85c each; six to fourteen, 80c each; fifteen or more, 75c each.

W. D. ACHORD
Fitzpatrick, Ala.
Extensive shippers for 19 years

BEE SUPPLIES
for
WESTERN CANADA
BEEKEEPERS
Catalogue free
S. P. HODGSON & SONS
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Queens
Three-Band Italians
Super quality at lowest prices
Are they good? Ask my customers, they will tell you.

Untested
1, 75c 6, $4.25 12, $8.00

Bees with Queen
2-lb. Package $2.30
3-lb. Package $3.15

Safe arrival and satisfaction guaranteed

N. Forehand
DeFuniak - - - - - Florida

Why the 1930 National Honey Week Was Successful

(Continued from page 215)

cehmical or laboratory tests on flour to insure the right amount of protein, ash, moisture, etc., could not determine baking quality. One blend of flour might test chemically like another and still bake differently. To protect the users of Gold Medal Flour from failure in baking due to variations in baking qualities, Washburn Crosby Company established an additional test. A sample of every new blend of flour was sent to the Gold Medal Test Kitchen at Minneapolis to be given a baking test.

The kitchen test was not done under the most advantageous conditions just to get good results. Members of the Betty Crocker staff bake all types of food with every new sample of flour, using ordinary home methods, both for mixing and baking, and typical family sized recipes, including bread, biscuits, pastry and cakes, to be sure the flour will bake perfectly.

If any new batch does not bake up to standard, the variation is quickly found, because the food is scored carefully and a record kept. So we can be sure that if the flour passes the kitchen test it will act right in the ovens of all the women who use it. The flour which does not test out satisfactorily must be remilled and pass through the test again before it goes to the public.

One function of the Home Service staff is to do this testing, and they do a great deal of experimental work on recipes until they are satisfied that the recipe makes the best product of its kind at reasonable cost. They also get the experienced housekeepers to try them in their own homes. If they are easy to follow and give perfect results, they feel confident that other women will have equal success.

After all these tests, is it any wonder that the Gold Medal staff feel that their recipes insure success? It means that even the most accomplished cooks can get better results with Kitchen-Tested Gold Medal recipes.

Now I think you will agree with me that we are fortunate in having honey combined with Gold Medal Flour in recipes bearing the kitchen-tested standard. Here is a typical honey recipe for Gold Medal Kitchen-Tested Flour, and they publish others for Gold Medal Cake Flour, Wheaties, and Washburn's Pancake Flour. We give here Gold Medal Kitchen-Tested Honey Nutlets. We won't include the other recipes this time.

Gold Medal "Kitchen-Tested" Honey Nutlets

1 cup shortening	1 egg
1 cup honey	½ tsp. soda
1 cup brown sugar	1 tsp. salt
4 cups of Gold Medal "Kitchen-tested" Flour	1 tsp. cinnamon
	2 cups nuts

Method: Melt shortening, add honey and mix well. Add sugar and beaten egg and mix well. Sift flour once before measuring. Sift flour, soda, salt and cinnamon together and add to the creamed mixture. Add the nuts. Drop by small spoonfuls on greased cooky sheet and bake. Place in an air-tight container for a week or two before using.

Time—Bake fifteen minutes.

Temperature—350° F., moderate oven.

Amount—Four to five dozen.

MEETINGS AND EVENTS

Current association meetings and organization notices are published in this department each month. Secretaries and other officers of organizations who wish publicity here should make sure that notices are sent in before the fifteenth of the month preceding publication. Frequently notices are received too late for use and consequently do not appear at all.

Bee Clubs

4-H bee clubs have recently been established in several Iowa counties. Three prizes have been provided for these clubs at the coming State Fair, and in addition the club demonstration teams will compete with demonstration teams in other lines of work. The club work has aroused much interest and offers splendid training for the youngsters who take it up.

L. W. Thorpe Has Disastrous Fire at Billings

On March 31, 1931, a very disastrous fire occurred at the Yellowstone Apiaries of L. W. Thorpe, Billings, Montana, in which the workshop and warehouse combined, known as warehouse No. 4 and warehouse No. 1, where all the yard supplies were stored, consisting of 400 supers with drawn comb, 150 supers with new foundation, 1000 supers with frames, queen excluders, chaff trays, foundation wax and numerous articles used in a first-class apiary, also tools in workshop and surplus equipment, were completely destroyed, entailing a loss of between $5,000 and $6,000, which was a very serious financial and commercial calamity to Mr. Thorpe, who purchased his first bees and equipment from Mr. C. M.

Chafee, of Billings, Montana, in 1915, and was the oldest established apiary in Yellowstone County.

The buildings were insured, but the contents were not, owing to the buildings being placed in a safe position away from other buildings, where there was very little likelihood of fire.

Owing to very steady west wind, the fire was confined to these buildings and prevented from spreading to the barns, large honey house and packing plant, where stocks of honey, extracting machinery, cans and equipment were located. Mr. Thorpe informs us that he does not expect to rebuild the warehouses, as house No. 2, with 2000 feet of floor space, will take care of his present needs. However, the equipment will have to be replaced before the honeyflow of this year.

Mr. Thorpe was operating three hundred colonies and expected to increase very materially, but now, owing to loss of equipment, it will be necessary to double back in order to gather a honey crop without drawing too much comb.

Summer Short Course

Announcement has recently been made of a summer short course in beekeeping at Iowa State College, Ames, May 28 and 29. For several years the short course has been held in winter, but this year it will be held in spring, when the work can be demonstrated in the apiary instead of depending entirely upon lectures.

Those interested should write to Prof. F. B. Paddock at Ames for program and also suggest any special problem which you would like to see taken up.

Arthur Pledger Inspector for Weber County, Utah

Weber County commissioners have appointed Arthur Pledger as bee inspector for two years. Petitions for the appointment of Pledger and the reappointment of Oliver S. Miller were received. Thirty-one persons signed Pledger's petition and eight signed Miller's, which was accompanied by the request of D. H. Hillman, state apiarist, that Miller be appointed.

Idaho Producers at Boise Criticise "Honey Products"

Idaho honey producers, at their Boise convention recently, decided to ask the office of the food and drug administration of the Bureau of Chemistry at Washington to stop the misbranding of syrup products as honey products. Mr. Kjosness, manager of the Mountain States Association, declared before the members that there were candies and other foods sold in the East as honey prod-

(Continued on page 245)

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Three-Banded Italians

LINE BRED

Highest quality and fully guaranteed in every way. One, **$1.00**; six, **$5.00**. Write for special offer on quantity orders. We can save you money.

Two-pound package with young queen for **$2.75**. Proper discount on quantity orders.

Uriah Apiaries, Box A, Uriah, Ala.

APRIL AND MAY --- BEES AND QUEENS

We offer you — the finest, light-colored, three-banded and golden bees in the South. Very gentle, easy to handle, great honey gatherers.

You can't afford to miss this opportunity.

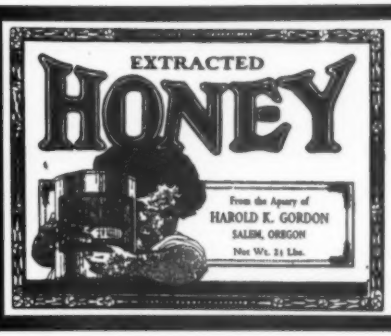
2-lb. package with queen	$ 2.75
3-lb package with queen	3.50
Ten 2-lb. packages bees with queens	25.00
Ten 3-lb. packages bees with queens	32.50

Queens 90c each, or $8.00 a dozen *Satisfaction Guaranteed*

Capital paid $100,000. 1400 stands of bees in five counties.
40 years' experience in breeding good bees.

THE ROBINSON APIARIES, Bartlett, Texas

These bees were developed during the most drouthy weather, and those which made good were kept for development



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American Bee Journal
Hamilton, Illinois

PACKAGE BEES

I shipped one customer in New York 994 three-pound packages of bees the past season, and of these only 41 packages arrived in bad condition. I had already shipped the same customer 500 packages in 1929. I am in position to give you the same satisfactory service. There has never been any foulbrood in this section of Georgia. I use liquid feed only. Price per package, any quantity:

2-lb. package with queen—1, $2.75; 5, $2.50; 25, $2.40; 100, $2.25
3-lb. package with queen—1, $3.50; 5, $3.25; 25, $3.15; 100, $3.00
Nuclei—2-fr. with queen, $2.75; 3-fr. with queen, $3.50—any quantity

Local representative for R. G. Dun & Co. past twenty-five years

N. L. STAPLETON . . . . Colquitt, Georgia

SMITH'S SUPERIOR BEES AND QUEENS

Guaranteed to please and give complete satisfaction.

Our prices are very low, so write at once for prices and folder on package bees. The best queens possible to rear, at the following low prices, SELECTED, UNTESTED AND GUARANTEED: Before May 20, one at 70c; 12, $7.20, and 25 up at 55c each. After May 20, one, 50c; 10,$4.50; 25 up, 40c each. Order direct—we will not disappoint you. THE BEST FOR LESS.

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To make money in the stock market or the bee business, you must buy when prices are lowest and take advantage of the rise. Packages and supplies have reached the bottom and prices will increase before another season. Replace those losses now!

One two-pound package with queen, $3.50; three-pound package with queen, $4.50. Untested queens $1.00 each. Quantity prices and descriptive circular on request. Safe arrival and satisfaction guaranteed. Health certificate with each shipment.

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The American Bee Journal does not accept medical or other objectionable advertising. All its advertising is subject to approval, thereby protecting its readers. You are safe in patronizing them. When writing mention the American Bee Journal.

SPECIAL PRICES

Medium Brood Foundation at 44c per pound

DELIVERED by PREPAID FREIGHT anywhere in U.S.A. in quantity of 100 pounds or over.

For Thin Super, add 8c per pound

On less than 100 pounds, price is f. o. b. Los Angeles, Calif.

All highest quality, Weed Process, new 1931 stock, packed in 25-pound wooden boxes

SUPERIOR HONEY COMPANY

814 EAST SIXTY-FIRST STREET, LOS ANGELES, CALIF.

BIG PRICE REDUCTION ON PACKAGES after MAY 10th

Thousands of Colonies Thousands of Nuclei

For the Breeding of Pure Three-Banded Italians Bees and Queens

Thirty-seven years on the job

Age, ability and experience account for why our bees are better and our service best

Our pure three-banded strain of Italian bees are carefully tested in our own honey production yards, located in Wisconsin, Nebraska, Iowa and western Canada. We know from actual test they are disease resistant, hardy, long-lived, gentle honey getters. No guesswork with us.

Our package prices are low. We make safe delivery whether it be 500 or 5000 miles away. Safe arrival we guarantee along with entire satisfaction in the full sense of the word. We have no disease and a certificate of health accompanies all shipments.

Special—Young 1931 three-banded Italian queens, prompt shipment, selected stock, 75c each; 12 to 50, 70c each; 50 to 100 and up, 65c each.

All queens warranted purely mated

Write for our descriptive circular price list of our packages and queens

M. C. Berry & Co., Box 697, Montgomery, Ala.

HUBER'S CaucasianQueens

They are gentle and wonderful honey gatherers. Circular free

Untested queens—One, $1.00; five to eleven, 85c each; twelve and up, 75c each.

Greenville Bee Company

Huber Forehand, Mgr.

Greenville, Ala.

An Easily Managed Home for Your Bees

A good hive has all the room the queen needs and also room for food and young. Often over 100,000 cells are needed at one time. No hive but the Modified Dadant gives this room in one compact body. It produces big colonies and big crops.

Send for this sixteen-page booklet telling how the Modified Dadant Hive is used by successful honey producers.

DADANT & SONS

Hamilton, Illinois

QUEENS AND PACKAGE BEES

To overcome low honey prices, beekeepers need good nectar-gathering bees, such as our three-banded Italians.

Two-pound package less queen, $2.25
Three-pound pkg. less queen, 3.25
Queens $1.00 each

Write for quantity prices. Order now. Shipping begins the first of April.

The FERN LEAF APIARIES

Herman Ahlers, Prop'r

CHICO, CALIF.

Prices Slashed

On Italian Bees & Queens

Untested queens, 50c each

	1	25 up
2-lb. Package with untested queen	$2.25	$2.15
3-lb. Package with untested queen	3.00	2.75

Write for prices in large quantities.

The V. R. Thagard Company

"Established in 1918"

Greenville, Ala.

Crop and Market Report

Compiled by M. G. Dadant

For our May crop and market report, we asked reporters to answer the following questions:

1. Condition of bees.
2. Condition of honey plants.
3. Honey left on hand.

Condition of Bees

Throughout the entire country the report comes universally that bees have survived the winter in excellent fashion. Even in the northern sections, where the temperature has been above normal, the bees have either wintered through the cellar satisfactorily or have been placed on their summer stands with very little losses. Of course, severe cold spells might still give considerable loss.

The only difficulty with the condition of bees this year is that with the prolonged warm weather there is apt to have been a very large consumption of honey, and this will result in a shortage of food during the heavy brood rearing season of the spring. Forearmed beekeepers will be watching their colonies closely to be sure this condition does not exist and so that the bees may continue to build up during the spring season previous to the honeyflow.

We will be very much surprised if there is not considerable quantity of queenlessness showing up during the later spring because of the fact that there was not the usual amount of requeening done during the 1930 season. This, coupled with the long egg-laying season which is possible during the present year, may show up a larger quantity of failing queens than usual.

Honey Plants

Conditions in the New England states and New York and northern Pennsylvania, as well as in New Jersey, seem to be very desirable for honey plants this year, the reporters figuring 100 per cent of normal at least.

In western Pennsylvania, however, and extending south and west through southern Ohio, Indiana, Illinois, Missouri, Kentucky, southern Michigan, southern Wisconsin, southern Minnesota, and eastern Iowa, is a large tract in which clover was largely killed out owing to the drought last season, and where the prospects for the present year are very unstable. In fact we will be much surprised if there is much of a harvest of honey previous to the fall flow in this entire section unless we have one of these surprising honeydew flows or isolated localities having alsike and sweet clover may benefit.

Of course there is always the unusual season where every honey plant seems to yield nectar and where we get a moderate crop where prospects were nil. However, in this entire section it looks like prospects would not be for over 25 to 50 per cent of the crop at present.

The contrary is the case with practically all sweet clover sections. Sweet clover seems to be one plant which has survived the conditions satisfactorily and the prospects for a normal crop seem satisfactory. The one exception is North Dakota, where the prospect does not seem to be for over 50 per cent of the crop, owing to a lot of plowing under of sweet clover and suffering of the remaining plants on account of last year's prolonged drought.

The entire southeast of the country seems to be developing in a satisfactory fashion. Florida has had an excellent crop from citrus fruits and conditions over the entire territory seem to be for a normal crop at least. This extends as far as Texas, where a good crop also is in prospect. Oklahoma conditions seem to be only fair, with very satisfactory conditions in the plains states of Kansas, Nebraska, and South Dakota. The intermountain territory likewise are expecting their crop, with perhaps less than normal in Colorado and states immediately surrounding it.

In the Northwest conditions are satisfactory.

California unfortunately seems to be doomed to have another spotty and relatively poor crop. The orange flow came unusually early this year and caught the beekeepers unexpectedly, so that their colonies were not in a condition to harvest as they should have been. In addition, the season has been extremely dry even in northern California and honey plants as a consequence have suffered severely.

All in all, it does not seem possible that conditions should so change for the better as to assure as good a crop of honey as we had in 1930.

In the central areas some beekeepers are already pointing towards 1932 as a honey year, figuring on boosting up their colonies and getting all conditions in proper order, because there is no hope for white clover this year, and the prospects are that this will be a white clover growing year and that 1932 will be the white clover harvesting year.

A report from New Zealand is to the effect that their crop now is practically harvested and will not be over 75 per cent of normal. The New Zealanders figure on enough honey for home consumption, with perhaps enough to supply the usual trade with the British Isles. Australia also reports a short crop.

Honey on Hand

The amount of honey left on hand in the United States at the beginning of the new honeyflows will not be preponderous. In fact the entire East and the entire South seem to have disposed of practically all of their honey. We do not believe there is over 10 per cent on hand, and this should be disposed of previous to the new crop. Of course there are isolated sections and isolated beekeepers where half or more of the crop is still left on hand, but this usually is due to difficulties in finding a market. The bulk of the beekeepers have disposed of their honey, and most of it at satisfactory prices, although much of the honey sold during the past six weeks has been sold at a sacrifice rather than carry over.

As stated in a previous page, it is the intermountain territory which is suffering particularly on account of heavy carryovers of honey. We have reports from the different states which would indicate that likely 40 per cent of the honey in these intermountain states is still in the hands of the beekeepers or in the hands of the marketing agency which is handling the honey for them. Recent reports would indicate that this honey is beginning to move now, but still at very low prices. We do not see how all of the honey can move before a new crop. Quite the reverse from holdings of the honey in the central western states, where in many instances it is held on the price of the beekeeper because he does not want to sell at prices below the usual 7 or 8 cents for good white clover honey.

The Northwest similarly reports large quantities of honey on hand, amounting to 30 to 40 per cent. In California likely not over 10 to 20 per cent is still unsold.

All in all, it would appear that there is to be quite a large carryover in the intermountain states, mostly extracted honey, although a few reporters have indicated that they have comb honey stocks on hand which they are unable to dispose of.

In the Southeast, the East, and in parts of the Central West, beekeepers seem to be encouraged rather than discouraged, because they have in many instances disposed of their crop without undue sacrifice of prices and have a revenue from this source. This has encouraged them to continue with their honey production and even consolidate their situation by filling all empty hives, etc. Undoubtedly some of the newer of these beekeepers are going to be severely disappointed because of the poor crop prospects. This is, however tempered a great deal by the fact that sweet clover is rapidly coming into many sections of the Central West and East and is bolstering up the honey plant sources.

We Are Cash Buyers of Honey and Beeswax
Submit samples, and best prices, freight prepaid Cincinnati. We also furnish cans and cases.
Fred W. Muth Co. Pearl and Walnut Cincinnati, Ohio

Renew Your Subscription
Write for Our Special Club Offers
AMERICAN BEE JOURNAL

Edwin H. Guertin 236 N. Clark St. Chicago
Buy and Sell All Grades Extracted Honey
References: 1st National Bank, R. G. Dun or Bradstreets Commercial Reports.

The BEEKEEPER'S EXCHANGE

Copy for this department must reach us not later than the fifteenth of each month preceding date of issue. If intended for classified department, it should be so stated when advertisement is sent.

Rates of advertising in this classified department are seven cents per word, including name and address. Minimum ad, ten words.

As a measure of precaution to our readers, we require references of all new advertisers. To save time, please send the name of your bank and other references with your copy.

Advertisers offering used equipment or bees on combs must guarantee them free from disease, or state exact condition, or furnish certificate of inspection from authorized inspector. Conditions should be stated to insure that buyer is fully informed.

BEES AND QUEENS

BUY your queens from Allen Latham, Norwichtown, Conn.

BOOKING orders for 1931. Combs of brood, $1 each; combless pounds, $1 each. Spring reared good Italian queens $1 each. Gentle, light colored stock. Everything shipped in approved standard packages. Orchard pollinating packages a specialty; fool proof. Fifteen years' experience. Reference given. Literature sent. No Canadian business accepted. Jes Dalton, Kenner, La.

EARLY PACKAGE BEES—Prompt shipment, beginning May 1. Two-pound package without queen, $2.50; three-pound, $3.50. Add price of queen if wanted. Choice hardy Italian queens, $1.00; ten for $9.00. Safe arrival guaranteed. Birdie M. Hartle, 924 Pleasant St., Reynoldsville, Pa.

FOR high grade golden and three-banded Italian bees and queens, try Carolina Bee Co. strain. They are of beautiful color and real honey gatherers. Untested queens, $1.00 each; six, $5.00; twelve, $9.00; $65.00 per hundred. Tested, $1.50 each. Write for prices of package bees. Carolina Bee Co., George Elmo Curtis, Mgr., Kenansville, N. C., Route 2.

WARD'S Italians get the honey. Queens and package bees. Queens for May, $1.00 each. Two-pound package and queen, $3.00, prepaid; three-pound package and queen, $4.00, prepaid. C. W. Ward, R. 1, LeRoy, Kansas.

GOLDEN Italian queens and bees for 1931. Quality higher, but prices lower. Untested, 75c each; $60.00 per 100. They are still the big, bright, hustling kind. They are guaranteed to please you. Two-frame nuclei or two-pound packages with queens, $3.00 each; ten or more, $2.75 each. Health certificate furnished with each package. E. F. Day, Honoraville, Ala.

FOR SALE—The famous golden Italian queens and bees. One queen, 75c; six, $4.25; twelve, $8.00. One 2-lb. package with untested queen, $3.00. Charges prepaid. Satisfaction guaranteed in U. S. and Canada. E. A. Simmons Apiaries, Greenville, Ala.

FOR more pleasure and profit, try our gentle Caucasians. Untested queens ready April 10. One, $1.25; six, $7.00; twelve, $13.00. Safe arrival and satisfaction guaranteed. Tillery Bros., Greenville, Ala., R. 6.

GOLDEN Italian queens, as good as can be reared with 25 years' experience. Tested, $1.25; select tested, $2.00. Untested, May and June: One, $1.00; two to five, 90c each; six to eleven, 80c each; twelve to 49, 70c each; fifty or more, 65c each. State inspected. Satisfaction guaranteed. D. T. Gaster, R. 2, Randleman, N. C.

IF you want gentle bees, good honey gatherers, my strain of golden Italians will please you. Prices: One untested, $1.00; two to five, 90c each; six to eleven, 80c each; twelve to forty-nine, 70c each; fifty or more, 65c each. Tested, $1.25; select tested, $2.00. Circular on request. Health certificate, safe arrival and satisfaction. Hazel V. Bonkemeyer, R. 2. Randleman, N. C.

QUEENLESS PACKAGES for strengthening weak colonies. Two pounds, $1.75; 2½ pounds, $2.00; 3 pounds, $2.25. Herron & Stone, Millerton, Oklahoma.

BEEKEEPERS can save money here. Package bees without queens. Two-pound package, $1.50 each; three-pound, $2.00. William Piefer, Gause, Texas.

NEW ENGLAND QUEENS—Hardy, vigorous, light-colored Italians. June-September, untested, $1.00. Roland T. Bousley, Rowley, Massachusetts.

BEES AND QUEENS—Two pounds of bees with queen, $2.00; three pounds, $2.50, in quantities. See my large ad on page 253. H. E. Graham, Box 735, Cameron, Texas.

SPECIAL attention given to late orders for packages. Our prices will please, too. R. V. Stearns, Wharton, Texas.

CHOICE, bright Italian queens that are a pleasure to work with and you will be proud to own. Requeen with stock that has been bred and selected in the North the past twenty-eight years for good wintering; hustlers, gentle, and fine color. One queen, $1.00; two or more, 90c each; $9.00 per dozen, Breeders, $10.00. Emil W. Gutekunst, Colden, N. Y.

GOLDEN Italian queens, solid yellow to tip, the finest ever reared. Pure mating guaranteed. Untested, $1.00; six for $5.00. Select tested, $2.00. H. G. Karns, Green Bay, Va., care State Forest.

SAME VALUE, but our high grade utility queens, sell for less after May 15. Write us about it. R. V. Stearns, Wharton, Texas.

CAUCASIAN QUEENS from Bird's Apiaries have no superior. Why? They are Mendelian bred, long lived, heavy layers, gentle, large carrying capacity, long tongues that do reach red clover nectar. Also queens from best imported stock on request. Select untested, six, $1.25 each; twelve, $1.15 each. Shipment May 25. Odebolt, Iowa.

FOR SALE

OLD BOOKS on bees for sale. Write us for list and prices. John F. Hawkins, P. O. Box 203, Chester, Pa.

BARGAIN LIST—Every item in good, usable condition. Priced to sell quickly. Reason for selling, no longer listed in our catalog. Brushes, cartons, glass jars, lithographed pails, smokers, veils, box seats, feeders, section presses, shipping cases, foundation, queen cages, etc. Write for free list. G. B. Lewis Company, Watertown, Wis.

SEVEN colonies Italian bees headed by young Root queens, in ten-frame hives. No disease guaranteed. Also shallow supers, brood chambers, etc. J. H. Fisbeck, 4224 College Ave., St. Louis, Mo.

BARGAIN—100 Root standard ten-frame hive bodies with drawn combs wired; metal covers, bottom boards, queen excluders, extractor, etc. Never had foulbrood. Address William D. Dunham, 97 E. Tenth St., Whitestone, N. Y.

38 COLONIES Italian bees, plenty of supers, extractor and uncapping table. Disease free and in fine condition. James Allen, Mohegen Colony, Peekskill, N. Y.

AMERICA'S GREATEST DELICACY—100 per cent pure maple syrup only $1.50 per gallon in five-gallon tins. "Honey maple table syrup" only $1.00 per gallon, five-gallon tins. Our maple syrup comes direct from the world's largest camps here in the center of the maple industry, and our table syrup is our own special blend; five years perfecting it. Many other specials. Write today for our illustrated circular, with 10c coin or stamps for samples. Griswold Honey Co., Madison, Ohio, U. S. A.

FOR SALE—Used 60-pound honey cans, two to case, 40 cents; not cased, $15.00 per hundred, f. o. b. Sioux City, while they last. Sioux Honey Association, Sioux City, Iowa.

FOR SALE—Bee supplies and equipments, in good condition. Very reasonable. Mrs. John Trimberger, Granton, Wis.

EXCLUDERS—28 good eight-frame, three-wire excluders at 35c. Write Lester Swanson, Cannon Falls, Minn.

HIGH GRADE bees in hives. George Schilling, State Center, Iowa.

FOR SALE—Hand power extractor; reversible, two-frame. Pockets 11x18 inches. Fine condition. Fifteen dollars. Watson Illingworth, R. 5, Bloomington, Ind.

HONEY FOR SALE

HONEY FOR SALE—Any kind, any quantity. The John G. Paton Company, 230 Park Avenue, New York.

FOR SALE—White clover honey in 60-pound cans. None finer. Satisfaction guaranteed. J. F. Moore, Tiffin, Ohio.

HONEY FOR SALE—All grades, and quantity. H. & S. Honey and Wax Company, Inc., 265 Greenwich St., New York City.

FOR SALE—Extra choice white clover honey, case or carload; also amber. David Running, Filion, Mich.

FOR SALE—Our own crop white clover and amber fall honey in barrels and cans. State quantity wanted and we will quote prices. Samples on request.
Dadant & Sons, Hamilton, Illinois.

FOR SALE—Northern white, extracted and comb honey. M. W. Cousineau, Moorhead, Minn.

NEW CROP shallow frame comb honey, also section honey; nice white stock, securely packed, available for shipment now. Colorado Honey Prod. Ass'n, Denver, Colo.

WHITE Clover extracted honey. Write for prices and samples. Kalona Honey Co., Kalona, Iowa.

CLOVER honey, choice, ripened on bees. Satisfaction guaranteed. Case or quantity. E. J. Stahlman, Grover Hill, Ohio.

FOR SALE—Delicious palmetto honey in barrels; also heavy bodied amber. P. W. Sowinski, Fort Pierce, Fla.

HONEY FOR SALE—White and amber honey in 60-lb., 10-lb. and 5-lb. tins. Write for prices.
Dadant & Sons, Hamilton, Illinois.

HONEY—We sell the best. Comb in carriers of eight cases each; extracted, basswood, buckwheat, sweet clover, white clover and light amber. Tell us what you can use for prices. A. I. Root Company of Chicago, 224-230 West Huron St., Chicago, Ill.

FOR SALE—Sweet clover extracted honey; quality and body fine. Thomas Atkinson, Route 5, Omaha, Neb.

LOWER prices on comb and extracted honey. Write H. G. Quirin, Bellevue, Ohio.

FINE quality clover-basswood extracted, 7½c; buckwheat, 6½c. Fancy white comb. A. J. Wilson, Hammond, N. Y.

STURDEVANT'S CLOVER HONEY—Largely from Trifolium Repens, with alfalfa and sweet clover. Comb honey, white, white wax; 14-, 12-, 10-ounce cases separately. Unwrapped or celophane wrapped. Bids invited. Sample sent for approval if bid favorable. Extracted, same quality, packed 2½-, 5-, 10-, 60-pound tins. No labels attached unless ordered. Associated Apiarists, J. H. Sturdevant, Manager, St. Paul, Neb.

FOR SALE—100% pure maple syrup, 100% pure country sorghum, comb and extracted honey. C. J. Morrison, South Bend, Indiana, 1235 Lincoln Way West.

MICHIGAN white clover honey of finest quality in new 60-lb. cans; also white comb honey. Orval W. Dilley, Grand Ledge, Michigan.

WHITE and light amber extracted in 60-lb. cans. H. L. Case, Canandaigua, N. Y.

FOR SALE—No. 1 sweet clover comb honey. E. J. Hallander, Logan, Iowa.

HONEY AND BEESWAX WANTED

WANTED—Shipments of old comb and cappings for rendering. We pay the highest cash and trade prices, charging but 5 cents a pound for wax rendering. Fred W. Muth Company, 204 Walnut St., Cincinnati, Ohio.

WANTED—A car or less quantity of white honey in 60-lb. cans. Mail sample and quote lowest cash price for same. J. S. Bulkley, 816 Hazel St., Birmingham, Mich.

WANTED—Car lots of honey. State quantity, shipping point and price. Mail sample. Hamilton, Wallace & Bryant, Los Angeles, Calif.

WANTED—Western states water-white and white honey in car lots. Send type samples. Advise quantity, price and point of shipment. E. F. Lane & Son, 325 Davis St., San Francisco, Calif.

WANTED

WANTED—Approximately twenty stands of bees. Must be in good shape. Donovan Carpenter, Malcom, Iowa.

WANTED—Man for general bee work; clean habits; can drive truck. State experience. Mrs. Harvey Whitacre, Saratoga, Wyo.

SUPPLIES

THE DADANT SYSTEM IN ITALIAN—The "Dadant System of Beekeeping" is now published in Italian, "Il Systema d'Apicoltura Dadant." Send orders to the American Bee Journal. Price $1.00.

BEST QUALITY bee supplies, attractive prices, prompt shipment. Illustrated catalog on request. We take beeswax in trade for bee supplies. The Colorado Honey Producers' Association, Denver, Colo.

SAGGED COMBS are result of slackened wires caused by wires cutting soft wood of frames. Use metal eyelets. Per 1,000, 60c. Handy tool for inserting eyelets 25c. Postage 3c per 1,000. Superior Honey Co., Ogden, Utah.

FOR SALE — We are constantly accumulating bee supplies, slightly shopworn; odd sized, surpluses, etc., which we desire to dispose of and on which we can quote you bargain prices. Write for complete list of our bargain material. We can save you money on items you may desire from it. Dadant & Sons, Hamilton, Illinois.

MAKE queen introduction sure. One Safin cage by mail, 25c; five for $1.00. Allen Latham, Norwichtown, Conn.

COMB FOUNDATION — Note these low prices on 20-lb. lots: Medium brood, 54c; thin section, 60 cents. Can furnish the new non-sagging foundation. Wax worked at lowest rates. E. S. Robinson, Mayville, N. Y.

FOR SALE—Queen mailing cages. Material, workmanship and service all guaranteed. Write for quantity prices. Hamilton Bee Supply Co., Almont, Mich.

MISCELLANEOUS

THE BEE WORLD—The leading bee journal in Great Britain and the only international bee review in existence. Specializes in the world's news in both science and practice of apiculture. Specimen copy, post free, 12 cents stamps. Membership of the Club, including subscription to the paper, $2.55 (10/6). The Apis Club, Brockhill, London Road, Camberley, Surrey, England.

PLANS FOR POULTRY HOUSES—150 illustrations. Secret of getting winter eggs. You need this book. Write for free offer and sample copy of Inland Poultry Journal, 51 Cord Bldg., Indianapolis, Ind.

HAVE YOU any Bee Journals or bee books published previous to 1900 you wish to dispose of? If so, send us a list. American Bee Journal, Hamilton, Ill.

MARBLEBOARD BINDER—For back copies of the American Bee Journal. Will hold two years. Keeps your magazines in shape for ready reference. Price only 75c, postpaid. American Bee Journal, Hamilton, Ill.

VITEX, "Negundo Incisa." The only nectar producing vitex listed by the Bureau of Foreign Plant Introduction. 24- to 36-inch trees, 50c, prepaid. Joe Stallsmith, Galena, Kansas.

HONEY LABELS and printing. Catalog and samples free. Correspondence solicited. Traders Printing Company, Springfield, Mo.

ATTENTION, BEEKEEPERS — Your last chance to plant Vitex (Negundo Incisa), this spring. The following packages are ready for you: Five 12- to 24-inch trees, $2.50; five 25- to 36-inch trees, $3.00. Lots of ten trees, 10 cents less per tree. Charles Mottet, Webb City, Mo.

Bees and Fruit

A joint letter has recently been issued by the Iowa Horticultural Society and the Iowa Beekeepers' Association calling attention of fruit growers to the importance of bees in the pollination of fruit blossoms, and suggesting that they get in touch with local beekeepers to secure bees. The cooperation between the Iowa Horticultural Society and the Beekeepers' Association has continued for some years and should prove profitable to both organizations. The affiliation of several societies with related interests in Iowa offers an interesting example of what can be accomplished by united effort.

Meetings and Events

(Continued from page 241)

ucts which in fact contained no honey at all.

Harry Newberry, of Filer, was elected president of the Idaho Association; C. M. Miller, of Nampa, secretary-treasurer.

Other speakers included C. F. Buck, of Walla Walla, Washington, and M. L. Dean, of the Idaho Department of Agriculture. G. P.

Oregon Meeting Set for Nov. 20-21

It has been decided to hold the next year's meeting of the Oregon State Association at Portland, November 20-21. It has also been strongly urged that next year's meeting be more in the nature of an educational meeting, and the officers of the Association hope to build up a program which will be of more general interest.

California Inspection Report

The report of Frank E. Todd, California state entomologist, recently made public, shows that a total of 284,400 colonies were inspected in 1930. These represented 8540 apiaries. Disease was found in 1360, a total of nearly 16 per cent. Thirty-four hundred and fifty-six of the 3993 diseased colonies were burned and the balance otherwise treated. The percentage of disease found in all colonies examined was slightly less than one and one-half per cent.

New Officers for Utah

The new ones were the old ones re-elected; pretty good tribute. At the meeting of the Association recently the 1931 fall convention was voted to be held at Ogden. The officers are: T. L. Ball, Ogden, president; J. R. Smith, Salt Lake, vice-president; O. R. Baird, Provo, secretary; S. W. Mower, Provo, and O. L. Malmgren, Centerfield, directors.

"From the standpoint of quality," President Ball reports, "the meeting was one of the best ever held." State Apiarist Hillman in his annual report said the average yield of honey this year would be about fifty pounds per colony, due to the drought. G. P.

Good Spot for the Message

Pure honey was advertised by the Pioneer Health Products Company, Inc., of Worcester, Massachusetts, on the "Succeed with Worcester" page.

F. H. Madison.

STATEMENT OF OWNERSHIP

Statement of the ownership, management, circulation, etc., required by the Act of Congress of August 24, 1912, of American Bee Journal, published monthly at Hamilton, Illinois, for April 1, 1931.

STATE OF ILLINOIS, } ss.
County of Hancock, }

Before me, a notary public in and for the state and county aforesaid, personally appeared M. G. Dadant, who, having been duly sworn according to law, deposes and says that he is the business manager of the American Bee Journal, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, rendered by the Act of August 24, 1912, embodied in Section 443, Postal Laws and Regulations, printed on the reverse side of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor and business manager are:

Publishers American Bee Journal, Hamilton, Ill.

Editor, C. P. Dadant, Hamilton, Ill.

Managing editor, G. H. Cale, Hamilton, Ill

Business manager, M. G. Dadant, Hamilton, Ill.

2. That owners are:

C. P. Dadant, Hamilton, Ill.
H. C. Dadant, Hamilton, Ill.
V. M. Dadant, Hamilton, Ill.
C. S. Dadant, Hamilton, Ill.
L. C. Dadant, Hamilton, Ill.
M. G. Dadant, Hamilton, Ill.
Leon Saugier, Hamilton, Ill.
Joseph Saugier, Hamilton, Ill.

That the known bondholders, mortgagees and other security holders owning or holding one per cent or more of the total amount of bonds, mortgages or other securities are: None.

(Signed) M. G. DADANT,
Business Manager American Bee Journal.

Sworn to and subscribed before me this fourth day of April, 1931.

MINNIE S. KING,
Notary Public.
My commission expires Nov. 19, 1933.

Yancey Hustlers for Canada

We ship hundreds of packages to Canada every year with perfect success. Our liberal overweight packages of young bees, with vigorous, hustling queens, and our prompt service will surely please you. We breed the three-band strain of Italians only.

	1 to 24	25 up
2-lb. package with queen	$2.50	$2.25
3-lb. package with queen	3.25	3.00

Write or wire for prices on large lots. Complete satisfaction guaranteed

Caney Valley Apiaries, Bay City, Texas

A Bee Paradise

Minnesota, North Dakota, and Montana, Idaho, Washington and Oregon are developing rapidly in beekeeping and honey production. Thousands of acres of sweet clover and other valuable honey plants promote high yield and fine quality. Much good territory remains to be occupied.

Beekeeping may be developed profitably as a sideline with diversified farming and livestock or as a specialized project. Conditions are equally favorable for bees and livestock. The most valuable feed and forage crops are easily grown and production cost is low.

Beef cattle, dairying, sheep, lambs and wool are all produced on a low cost basis on low priced land. Among the most favorable localities for bees and livestock are the Red River Valley, Milk River Valley, Lower Yellowstone Valley, and Valier Project.

Write for free book on either state and detailed information about bee raising and farming opportunities. Low Homeseekers' Round Trip Excursion Rates.

E. C. Leedy, Dept. J. -:- GREAT NORTHERN RAILWAY ST. PAUL, MINNESOTA

"Dadant System of Beekeeping"

By C. P. DADANT

Pointers on the use of the large hive. Gives results of years of actual experience by the Dadants. 120 pages, illustrated. Cloth bound. Price $1.00.

AMERICAN BEE JOURNAL .·. HAMILTON, ILLINOIS

PACKAGE BEES AND QUEENS

THREE-BANDED ITALIANS

I guarantee my bees and queens to be as good as money can buy; also prompt service, full weight, safe arrival and entire satisfaction.

PRICE LIST

I prepay all transportation charges

2-Pound packages with select untested queens ..... $ 3.50 each
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Twenty-five cents less per package on orders for ten or more packages
Select untested queens, 75 cents each; ten or more, 60 cents each
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HAYNEVILLE APIARY COMPANY

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Let us book your orders now for May and later delivery. No deposit asked. Our bees are very gentle, easy to handle, and are record honey producers.

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Health certificate with each shipment

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Are Seldom Equalled and Never Surpassed

They are just plain old three-banded Italians and they are pleasing hundreds of satisfied customers in U. S. A. and Canada. I'm sure they will make a regular customer of you if it is honey you are after, and not beauty.

They are shipped in strong, light cages. Ten to twenty per cent overweight when shipped and I have not had enough losses to file claim in the past two years.

No disease here—never has been. And as to service, no order has ever been on my books 72 hours after they are booked to go. I assume all losses, giving prompt replacement or refund your money.

PRICES

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Queens, 65 cents
Tested queens, 50 cents more

A. E. SHAW
SHANNON, MISS.

ITALIAN QUEENS

Last fall I requeened all colonies with the oldest strain of Italians in the State of Indiana. Yellow all over—queens producing bright three-banded bees. I use the egg in producing my queens. This is the finest method known. Queens ready May 25, $1.00 each; six for $5.00. Breeders, $4.00.

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Two-pound package with untested queen, $2.00 each, any number. Three-pound package with untested queen, $2.75 each, any number.

All Italian stock. No disease. Health certificate with each shipment. We guarantee safe delivery and satisfaction. Book your order early and have shipment arrive on time. Baby bees and young queens. 12 per cent overweight.

THE MANGHAM APIARIES
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supply bright Italian bees and queens excelled by none. No special bee-proof protection is necessary when working with bees produced by our select golden queens.

In filling orders, our queens are caught, cages filled and shipped the same day from New Orleans, over most direct lines.

Satisfied customers in 34 states prove there is quality in our product and advantage in our method of shipping. Write for prices—they're reasonable.

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Killion, Indiana Comb Honey Champ, Says—

"After Three Year's Straight Winnings — I've Settled Down to Dadant's Surplus Foundation for all My Section Comb Honey."

"Three years—twenty-seven, twenty-eight- twenty-nine—my section comb honey, built on Dadant's Surplus Foundation, won first premiums at the Indiana State Fair, both for the single case and for the five-case entries. During these showings, I did not take great pains to select show honey, but used just the ordinary run of fancy honey. I have now settled down to Dadant's Thin Surplus for all my section comb honey. There is no better."

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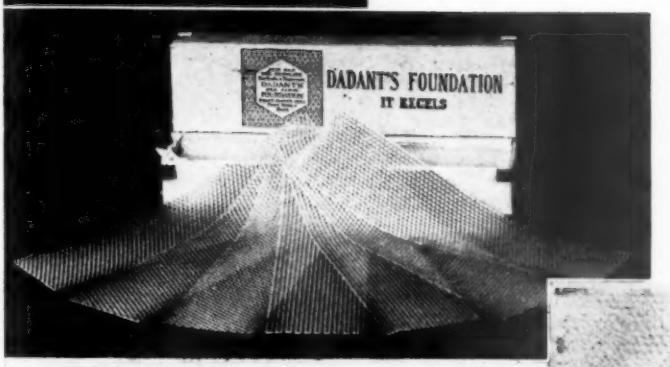

Not Only Looks, But *Taste*

Taste, as well as looks, sends the customer back for more. Only the lightest colored, tastiest, chewiest of pure beeswax gets into Dadant's Surplus. It is safe for food use. Each tender sheet is fit for the highest grade of comb honey—just as "chewy" as the comb the bees make.

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Made By

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Makers of Famous Foundations—Crimp-Wired, Plain, Surplus

SOLD BY DEALERS EVERYWHERE

The POSTSCRIPT

GOSSIP ABOUT THE OFFICE IN THE MAKING OF THE MAGAZINE

The accidental landing of an airplane in an apple tree has raised the question as to the value of the tree in the settlement of damages. This set me to wondering first about the value of the apple tree and then the value of a hive of bees. When bees are offered for sale, values are usually little above the equipment that houses them. Supposing, however, that someone should smash my best colony in the spring of the year, just how much has he injured me? It is not hard to determine the price of a new hive; any supply catalogue tells that. Here is a strong colony of bees on good combs ready for the season. If the season be good they might gather a hundred or perhaps two hundred pounds of honey and still the bees and equipment would be left next fall. How much is a good colony of bees worth?

They Wouldn't Die

A New York beekeeper writes that he bought an apiary of Langstroth hives with one colony in a big hive of the Dadant dimensions. He was not interested in the big hive and gave it no attention, because it was an odd size. Each year he put on supers and removed the honey, but never opened the brood chamber. Now he has decided that if the bees in the big hive can give him a crop each year for seven years without any attention at all, it may be to his advantage to have more big hives. He intended to let this colony die, and reports that it is the best colony he has. Seldom do we find a man who, having given the big hive a fair trial in comparison with the others, is not enthusiastic in their favor.

Trade Barriers

A Canadian reader writes to comment on an article in another publication in which there was agitation in favor of higher tariffs against foreign honey and the urge for seeking foreign markets in the same article. Our reader wonders how one could advocate both at the same time. It is a poor rule that won't work both ways.

Have We Sidestepped?

A Florida reader accuses the American Bee Journal of sidestepping the disease question. Since we have given a hearing to both sides of the question and stated the views of the publishers in the editorial columns on several occasions, it is hard to see where we have dodged anything except a few of the brickbats that have been aimed at us by contestants on both sides of the controversy. When it was brought to our attention that beekeepers in foreign countries are using the material in American Bee Magazines to secure embargoes against American honey, it raised a serious question as to whether it is worth while to devote so much space to agitation that settles nothing. After all, the beekeepers in each state are working out the problem in their own way without regard to our opinions.

Hard Sledding

A Wyoming reader writes that, bad as they are, times will get better again. He adds: "This does not seem to me to be as bad as '73, '93, or even '21, or when we were taking cashiers' checks instead of money to pay our bills." He comments on the low prices of other products, such as onions, lettuce, etc., and concludes that the honey producer is as well situated as other folks, anyway.

Demonstration Apiaries

Whelan's article on page 223 may well offer suggestions to other states. This work has been under way in Iowa for many years and as a result there has been a marked improvement in beekeeping methods in many neighborhoods. There are many Iowa farms where bees were formerly neglected, where they are now an important source of income. In the vicinity of demonstration apiaries one is likely to find the bees well cared for or not kept at all.

Printing Errors

It is amazing how many things can happen to annoy the staff in the making of a magazine. The misplacement of a letter in the setting of the type often gives a meaning foreign to that intended. On page 231 our friend W. J. Sheppard is made to appear as "J. H.," a name by which none of his friends would recognize him. The error was not discovered until too late to correct it. Judging from the number of letters concerning top entrance hives that have poured into this office, his article will be read with interest even though the readers do not recognize the author.

From Foochow

We learn that Miss Sara Liu, of Foochow, China, is a student of bee culture at Massachusetts College of Agriculture. Miss Liu is a long way from home. We have had several young men who came to this country from China to study bee culture, but young ladies who come from abroad to study our industry are rare. Success to Miss Liu.

Hive or Queen

James E. Crosby, on page 213, brings out some interesting points in connection with the size of hives. He shows that quality of stock is of first consideration, with management next. While his results show larger returns from the large hives, he indicates that similar results can be obtained with the smaller hives by proper management.

One point which may well be mentioned in connection with this article is that to obtain equal results with the small hives requires more labor. Under present conditions, when every effort is made to reduce cost of production, labor saving is a very important consideration.

Color Again

On page 214 Bohne takes another crack at the grading rules. The question arises as to why all the excitement? The grading rules are made to suit the requirements of the buyers, and the qualities that the buyer stresses must be recognized. If the buyer wants to know the color of the honey first, what can we do about it?

Personally, I agree with Bohne that entirely too much emphasis is placed on color in the markets, but it is because we have not given the public sufficient information regarding our product. Usually a mild flavor is associated with light colored honey, and most palates prefer a mild honey.

To change the grading rules will not make a difference in public taste It is said that a rose will smell as sweet by another name. Likewise the buyer will look for the same quality under a different standard. We must give the public what it wants, but teach it to want what we have to sell.

Anderson's Scheme

Perhaps W. E. Anderson is starting something when he suggests regional organization on page 230. For twenty years past the bee men have been trying to establish an efficient national association. Most of our prominent leaders have had a turn at the job and all have met with indifferent success. Our country is so big and it costs so much to get together that each meeting becomes largely a meeting of local beekeepers. It is hard to agree on a program which will be of equal interest to bee men of California, New York and Georgia. We await with interest the comments of our readers.

FRANK C. PELLETT.